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April, 1903

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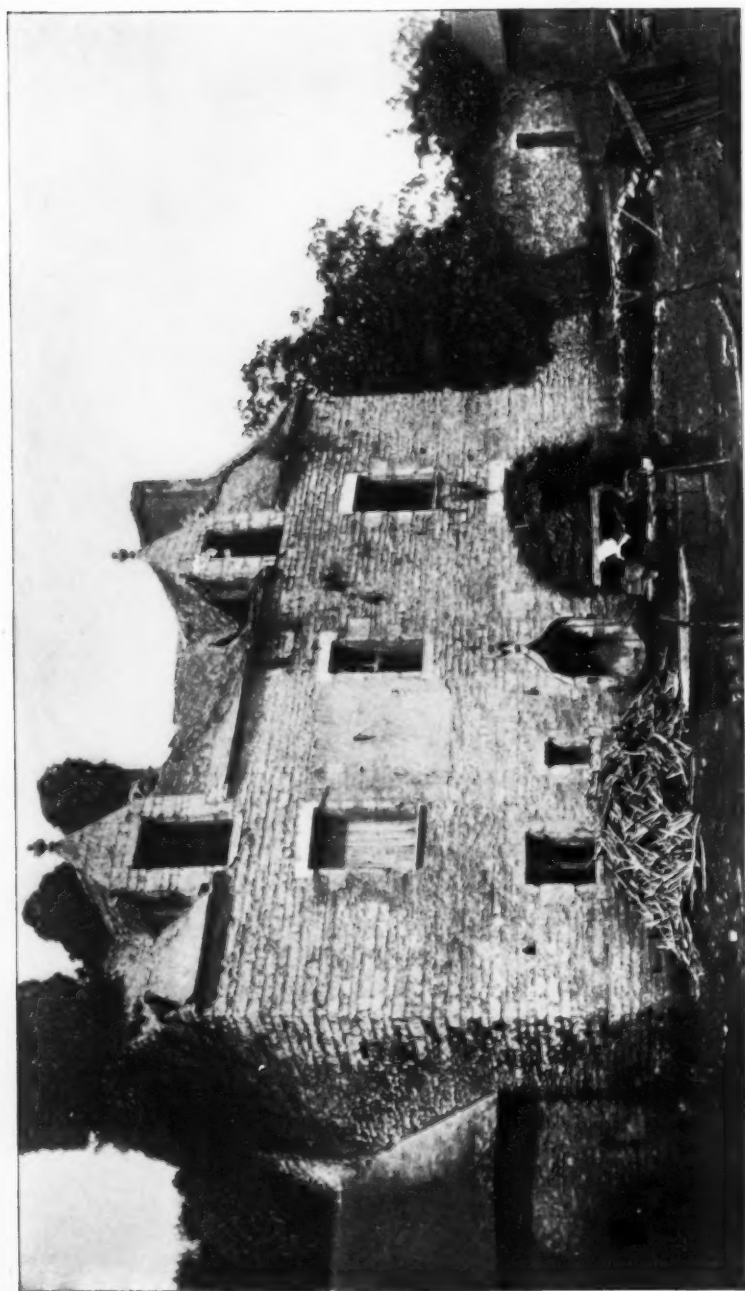
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A SMALL FARM OF THE XVI. CENTURY.

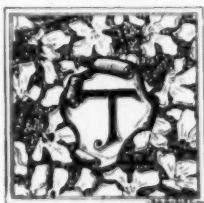
The Architectural Record.

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FRENCH FARMS.



THE wealthy Romans maintained estates in the country, which they termed Roman Villas, each of which was composed of three distinct groups of buildings: First the Villa Urbana, being the owner's residence itself; secondly the Villa Rustica, the quarters of the slaves and domestic animals; and, thirdly, the Villa Fructuaria, the stores where all the garnered crops were kept. These various divisions were completed by an exterior farm yard, an area where the corn was threshed, an apiary, a fish pond, an orchard and a vegetable garden. It is not our purpose to enter into a detailed description of these farms. Let us merely mention that some among them presented a very remarkable arrangement, as is shown by a reconstruction by M. Lévail (Fig. 1), made by him from the descriptions contained in the writings of Vitruvius, Varro and Cato the elder, etc. For many centuries no improvements were made in this line. On the contrary, there was a retrogression. It is only recently that there has been any scientific planning of farm buildings.

It is evident that the requisites for the establishment of a farm are as varied as the habits, the customs, the climate, the topography of the country and the nature of the cultivation. The cultivation of the vine and the rearing of the silk worm, for instance, practiced in the South, necessitate special buildings, lye-tubs, large cellars, wine presses, silk-worm nurseries, etc. In the same way, farms which are situated at the seashore should devote different parts to the stowing of fishing instruments, and to the manufacture of cases and baskets for the shipping of the fish and the shells. It is equally evident that the spirit of initiative and the fancy of cer-

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tain proprietors are likely to lead to some peculiarities in the fittings of the farm buildings. At any rate, it may be said that certain general dispositions have been adopted nowadays for all rural estates, and we shall proceed to enumerate shortly the conditions with which the site of the farm is to comply. This site must be wholesome; in other words, the different buildings and, especially, the courtyard, must be protected from the prevailing wind; it is necessary to avoid exposure of the farm to the wind coming from a swamp. It is prudent, at any rate, to avoid as much as possible the neighborhood of swamps, and the same is true of too humid grounds. The best protection against the wind is a line of full-grown trees, between which one may plant a hedge of tufty shrubs, bordering a slope. From the point of view of the improve-

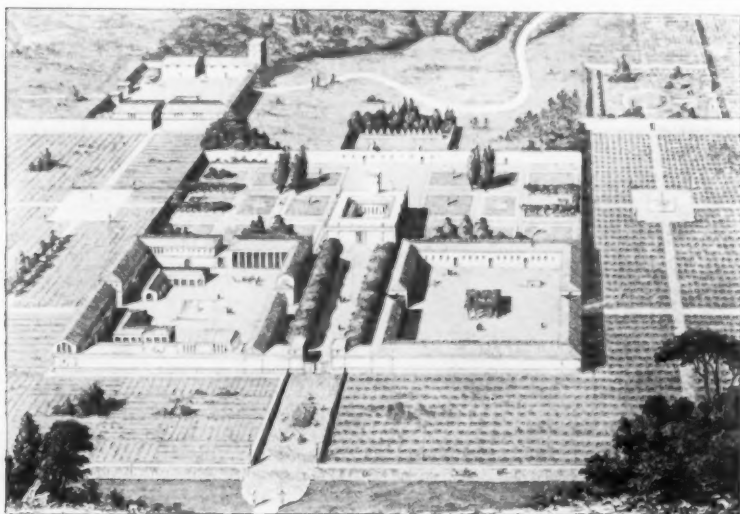


FIG. 1. RECONSTRUCTION OF A ROMAN COUNTRY ESTATE.

ment of the sanitary condition, it is well to choose a slightly sloping site, which facilitates the drainage of the rain. A general slope of 0.002 per meter will be amply sufficient for this purpose. It is indispensable that the yard be at all times provided with the necessary quantity of drinkable water (wells, springs, river, bucket-pump operated by a windmill, etc.). In order to avoid the infection of the well water, it is well to place the manure and the liquid manure tank at the low point of the yard, and the well at its high point, and to have a meadow below the manure, so as to utilize the overflow of the liquid manure tank. Finally, from a hygienic point of view, the general exposure of the farm should be to the south or east.

In order to avoid difficult, long and expensive transpor-



FIG. 2. ENTRANCE GATEWAY TO A FRENCH FARM.

tation, the farm should be placed at the centre and at the medium level of the fields and near the roads of communication leading to the economic centres. The farm will be well situated if at 100 or 200 meters from the road with which it will be connected by an avenue planted with fruit trees. As a general rule, it is necessary to: 1. Place the dwelling house at the centre and rear of the yard, in order to enable the manager to have an easy and constant oversight from his house; 2. Group the buildings according to the importance of the farm on a single line, or in a square, or in a parallelogram with a central courtyard; 3. Place nearest to the dwelling house the buildings intended to hold high-priced animals; 4. Separate the principal groups of buildings from each other by empty spaces, or by sheds or pent-houses, and isolate the barns and fodder storehouses from the dwellings, in order to diminish the causes of fire and to be able, in case of such an accident, easily to surround the burning buildings; 5. To lay out the buildings in a manner to permit their subsequent enlargement, if necessary. The yard of the farm is limited, either by the buildings alone, or partly by the buildings and partly by the slope and the hedge. It is, in the first case, especially, often closed by a cart gateway (Fig. 2). The medium dimensions of the yard are from 4 to 5 ares* for an estate from 40 to 60 hectares†; from 7 to 12 ares for an estate from 60 to 100 hectares; from 25 to 35 ares for an estate of more than 100 hectares. On an average, the area of the yard is, therefore, 1-1,000 part of the area of the estate, but for the large yards the width ought not to exceed a maximum of 40 meters. Beyond this dimension we have noticed that the interior transportation is rendered too tedious, and, therefore, too expensive.

The rural estates are divided into small, medium and large farms. It goes without saying that the residence of the farmer should always be in proportion to the cultivated space.

Let us pass at once to the large farms. By large farms we mean those which contain more than 50 hectares of cultivated area. In these large farms the varieties of agricultural speculations must evidently be taken into account. Thus, on farms where cereals form the basis of cultivation, the barns and stables for the plough horses constitute, with the dwelling house, the principal buildings. On estates where milch cows are kept, the stables and the milk and cheese dairy are of great importance. On those where the rearing of cattle is considered as one of the principal products the stables are greatly developed. But, if the rearing of hogs is intended, or of wool-bearing animals, or of horses, sufficiently large pig stys or sheepfolds or stables must be built. Finally, when in-

*An are is about 120 sq. yards. †A hectare is about 2½ acres.

dustries (distillery, oil refining, or starch manufacturing, etc.) are added to the farming, they will need special buildings to meet their requirements. If these industries necessitate a steam engine, it will be necessary to group around this engine, as far as it is possible, the workshop for the mechanical preparation of the food, as well as the premises containing the machinery which may be put in motion. Disposition in a single row, or at right angles, is no longer possible on account of the great length which would have to be given to the buildings, and, consequently, to the yard. Two parallel lines, at a distance from one another of about 40 meters, can be adopted, the different premises being contiguous or separated on each line. The yard of rectangular shape can be closed at each extremity by walls or barriers. This arrangement, which permits the building to be extended, is rarely employed, because

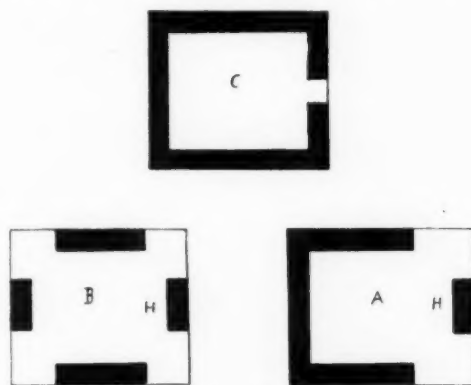


FIG. 3. DISPOSITIONS OF FARM BUILDINGS AROUND A FOUR-SIDED SPACE.

it does not sufficiently protect the yard from the wind and the sun. The dispositions which are most often used are those in which the buildings are grouped around a quadrilateral line, Fig. 3. It is well to remark that disposition A, and especially disposition B, permit the extension of the buildings, which is not the case with the yard, C, whose perimeter is entirely occupied by the buildings. In the dispositions A and C there are corners, the building of which always proves expensive, and which can only be used with difficulty. In this respect disposition B is, therefore, preferable. The dwelling house should be placed in a central position in H of the plans, in order to facilitate the superintendence of the manager. The circular form which has often been proposed would be a good one, if it were not difficult to build; its place can be taken by a polygonal disposition, a diagram of which we give in our Fig. 4. At A is the dwelling, where from it is easy to oversee the sta-

ble, B; the sheepfold, C; the cattle stable, D; the poultry house, F; the pig sty, G; the barn, H; the shed, I; a second shed, K; and a second cattle stable, M. The letters N, E, S and O indicate the north, east, south and west.

We shall give several model dispositions of large farms. Let us cite, to begin with, the farm of Merchines, situated in the Department of Meuse, near Bar-le-Duc. This estate is very well located and disposed. The barns open to the north; the sheepfolds to the southeast. The cow house is at the same time exposed to the southeast and to the northeast, which makes it possible to maintain therein a moderate temperature throughout the summer and winter. The master's house stands in the middle of the garden,

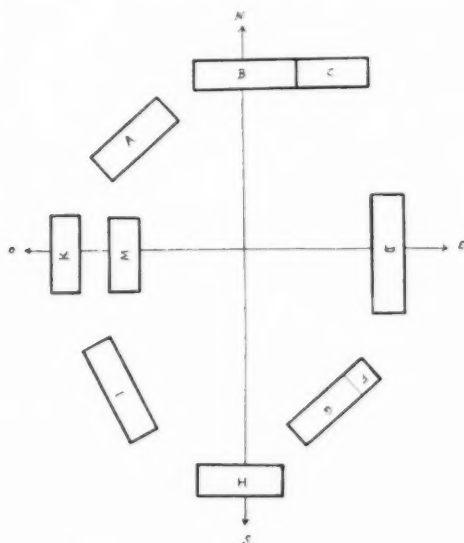


FIG. 4. A POSSIBLE DISPOSITION OF FARM BUILDINGS.

opposite the farm. On each side of the entrance are sheds for the purpose of storing the material. In those on the right side is the manager's office. The building on the right contains the barns and a large shed sheltering the crops. A carriage shed occupies the rear of the closed yard. In the building to the left are the stables, the sheepfolds and, in the centre, the private dwelling of the manager and his family. In the rear is a beet distillery. The power house closes the parallelogram. Annexed to its rear is a little milk dairy, where the milk which has just been drawn is temporarily kept. In the yard are the dung hills, a liquid manure ditch and pig stys, the opening of which is to the northeast. To the southwest are added on the right the poultry house and on the left a forge and a baking house. In a closed space young an-

imals can be kept at liberty. Finally there is a well, with a pump and a trough to water the cattle. Behind the barns, protected against the north winds, is an orchard with beehives and a kennel. The farm is framed by roads which separate it to the right from the dwellings and little gardens of the laborers and the chapel, and to the left from a pond in which the animals bathe.

We shall give more details of the farm of Certes. The con-

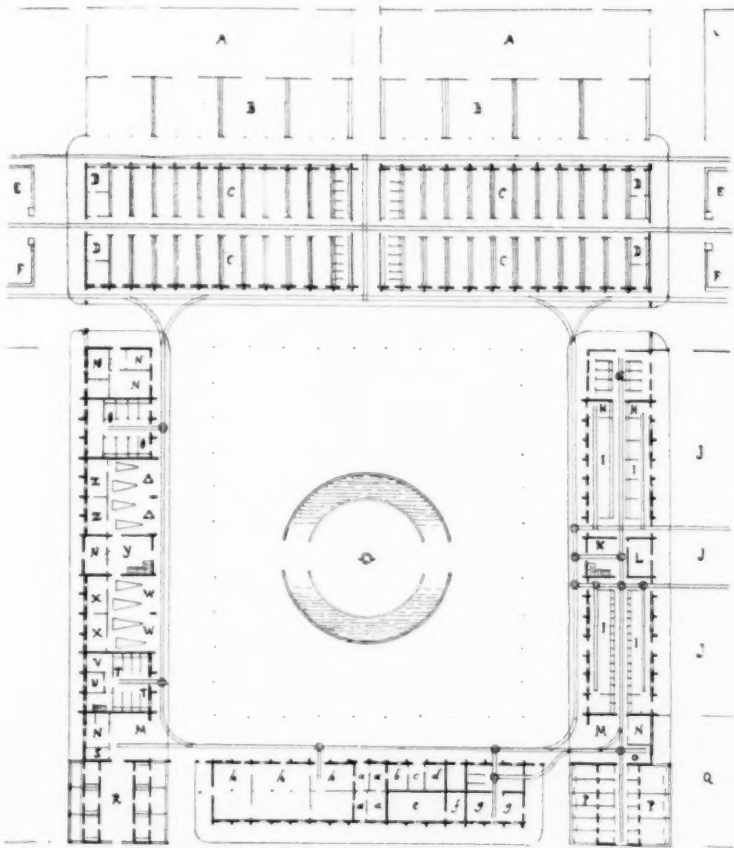


FIG. 5. GENERAL PLAN OF THE FARM OF CERTES.

Architect, M. Leon Cazenave.

struction of the buildings on this farm was carried out under the intelligent direction of Mr. Leon Cazenave, an architect who has devoted his attention especially to this kind of building, and has caused it to make appreciable progress. Upon this model farm have been applied most improvements known up to date for the keeping of cattle. It is one of the best arranged of its kind in France. The buildings of which we speak have been erected

on the important estate of Certes, situated on the border of the Basin of Arcachon. They cover an area of 4,600 square meters* of buildings and 1,600 meters of sheds. They are so fitted out as to be capable of satisfying all the needs of the estate; the rearing of cattle, sheep, hogs, poultry, storing of crops and of materials, etc., besides different sections devoted to the storing of fishing instruments and manufacturing of cases and baskets for the shipping of the fish, an important trade which has been added to that of breeding animals. These buildings have been placed so as to have their sides correspond exactly with the four points of the compass; they rest on a sandy ground, the substratum of this ground being formed by the sand of the moor and a ferruginous sandstone; on the surface is the moving sand of the downs. Their ensemble forms a rectangle of a width of 100 meters by about 130 meters of depth, with a large central yard. The masonry of these buildings is made of hard, rough stone in the foundations and the basement up to the height of one meter. The rest of the construction is built of the bricks of that country, rough-walled with mortar of hydraulic lime. The courses and crownings of the pillars are of cut stone. The protruding bricks are the only decoration. They are manufactured in the factories of the country. The extremely light carpentry is of iron, with steel rafters. The roofing is of hollow tiles of the country. The floors in the places where it is exposed to the washing water and to the vapors of the animals' perspiration, as well as the places exposed to the vibration of the engines are made of re-enforced cement. Fig. 5 represents a general plan of the farm. The following is a recapitulation thereof; A the sheep pens; B, open sheepfolds; C, sheepfolds, strictly speaking; D, dwellings for the shepherd; E, manure; F, liquid manure; G, calf stables; H, boxes for the bulls; I, cow houses; J, pens for the cows and their young; K, chamber of rations; L, dwelling of the cowherd; M, sheds; N, laborers' dwellings; O, bran stores; P, pig sty; Q, pig pens; R, farmyard; S, grain stores; T, stable; U, dwelling of the coachman V, saddlery; W, carriage shed; X, fishing instruments; Y, material; Z, boxes and baskets; Δ , agricultural implements; \triangle infirmary; a, superintendent's dwelling; b, a dairy; c, the laundry; d, annex; e, carpenter shop; f, motor; g, food preparation; h, depôt and stores.

The sheepfolds are placed to the north and south. They can hold 1,600 sheep, and are divided transversely by double cribs, which form as many small separate sheepfolds. Four departments are reserved for the rams and ewes under observation. The shepherds have their dwellings at the extremities of the sheepfold. The sill of the side doors is raised at 0.50 meter from the ground. In

*A meter equals 39.37 inches.

order to make the ewes get out, the shepherd places at each door two narrow planks, one at the interior and the other at the exterior, forming two inclined planes in opposite directions; this disposition prevents the ewes from coming out in crowds and hurting themselves against the door posts. On the north side of the sheepfold is a shed, light and open to all winds. During the fine season the openings on the south side are closed by mattings, and those on the north side remain open day and night. The ewes can circulate freely and pass from the interior to the exterior. In winter, on the contrary, the openings on the north side are closed, and those on the south side are open to permit the sun's rays to penetrate the sheepfold. The doors of the sheepfold are cut in the middle, the upper part alone remaining open when it is intended to leave the ewes in the fold. Ventilation is effected by

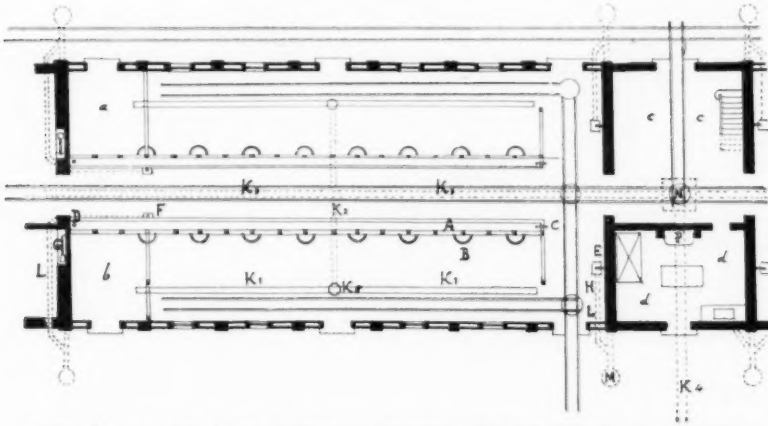


FIG. 6. DIAGRAM OF THE COW-HOUSE OF THE FARM OF CERTES.

means of draft flues. The building for the cows is situated in the right wing. It is divided into two parts, by the chamber of rations and the dwelling of the cowherd. Fig. 6. represents a plan of these cow houses (eastern façade). The stalls are to hold fifteen cows. In *a* is the observation box; in *b* the box of the bull; *c*, the chamber of rations; *d*, the dwelling of the cowherd. The animals are placed head to head, with a broad central passageway for the food service and the cleaning of the mangers. The food is not put in the mangers before a stream of water has been made to run over them by means of the faucet, *C*, and they have been vigorously swept with a broom. The dirty water runs off by the stopper, *D*, at the extremity of the cow house. In *A* are the mangers, and in *B* the water troughs. The animal can quench its thirst in these small watering troughs, which are in communication with each other and are filled with water by simply opening the faucet,

E. The emptying of these watering troughs is effected immediately after each meal by means of the faucet, F. A boiler is placed in the oven, P, of the cowherd's dwelling, and by means of this boiler warm water can be had whenever it is needed. A system enabling the cowherd to detach all the animals with one single movement, in case of fire, is placed along the mangers; the levers and counterpoises are placed in G. The lever causes an iron horizontal bar to make half a revolution around itself, disengaging by this movement the links of the animals' chains, which are freed by reason of this manœuvre. Figure 7 represents a plan of the extremity of these cow houses (west). The dairy to the right of the superintendent's house is exposed to the north. The floor and the tiling are of cement, and the walls are covered with ceramic. The shelves are of glass and are supported by enameled cast-iron

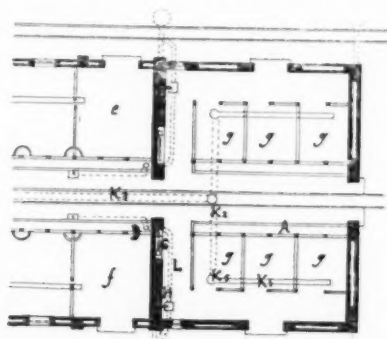


FIG. 7. PLAN OF THE EXTREMITY OF THE COW-HOUSE, FARM OF CERTES.

brackets. The double partition of the walls secures an even temperature.

The buildings of the pigs (Fig. 8) are exposed to the south. They are composed of two rows of six pens, separated by a central passageway, which forms a passage for the feeding. One of these rows has its pens, A, reserved for ordinary pigs. The other row is reserved to the sows (pens B) and to the young hogs (pens C). Each pen is in direct communication with the yard, D, surrounded by grates, in which the animals can gambol and warm themselves in the sun. The door which separates the yard and the pen is composed of a stationary upper part, with movable latticed panels to regulate the ventilation. The lower part is movable and can be opened inward and outward by the pressure of the animal, which accustoms itself very quickly to this exercise. Combination bathing and watering places with running water are placed in the small lateral yards. Besides these bathing places,

there is a pool called the "force bath." You cannot see it in our different plans. It is placed in a meadow adjacent to the pig sty and compels the animals by force to take their bath. A narrow passage in which the hog cannot turn round, once he has entered it, terminates in an inclined basin of the same size, and through which the most recalcitrant animal is forced to swim in order to get out of the passage. The barns are provided with mangers into which is emptied the food brought there by little cars. By means of a shutter, fastened horizontally with hinges, the trough can be shut at the animal's nose, and thus cleaned without trouble. Draft flues assure the constant change of air. As far as the drainage of the liquid manure is concerned, it is attended to in the same manner as in the cow houses; gutter stones lead

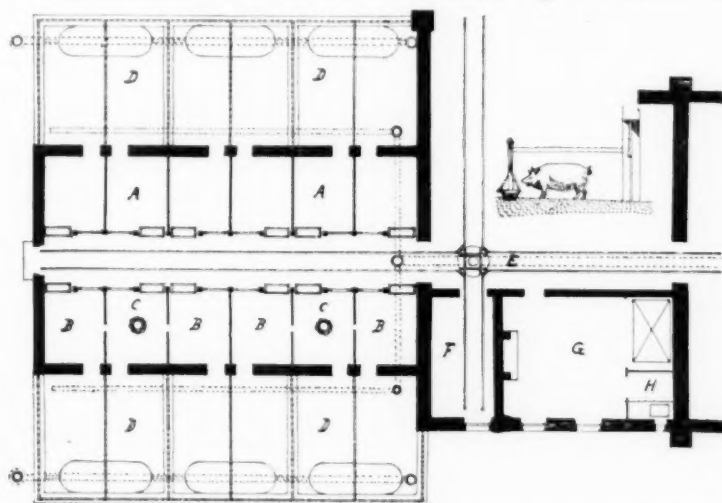


FIG. 8. THE PIG-PENS AND BUILDINGS OF THE FARM OF CERTES.

to the central collector, E, of the right wing. As has been seen, the pens of the young pigs are on the side of those of the sows; a separation pierced by an aperture too narrow to let the sows pass, permits the young ones to circulate and to reach the food quietly, protected against the voracity of the sows.

We will now examine the preparation of the food, which is of capital importance in the running of a farm. At the farm with which we are dealing, the machine building has been placed to the right of the offices, facing the south (see the general plan, Fig. 5), under the eyes of the manager and near the cow houses and the pig stys. The tuber stores and other crops are brought to the machine building by small cars (Fig. 9, plan of the ground floor). What is not used immediately can be stored away and held in reserve.

This is the explanation of Figure 9: A, fermentation boxes; B, the stairs to the loft; C, cooking utensils for food; D, grinding machines; E, washing machines for the roots; F, root cutters; G, crushed cakes; H, flattened grain; J, the bran coming from the threshing machine; (The cakes, grain and bran come from the first floor); K, trap door; L, sack hoisting machine for capstan; M, trap door for the minced straw; N, trap door for the grain; P, sink; t, sewerage for the washing water; T, cesspools; V, circular mechanism for the fodder and food; x, outlet of the food; W, motor; T, superintendent's house; U, dairy; V, laundry; X, annex; Y, carpenter shop; Z, yard for the hogs.

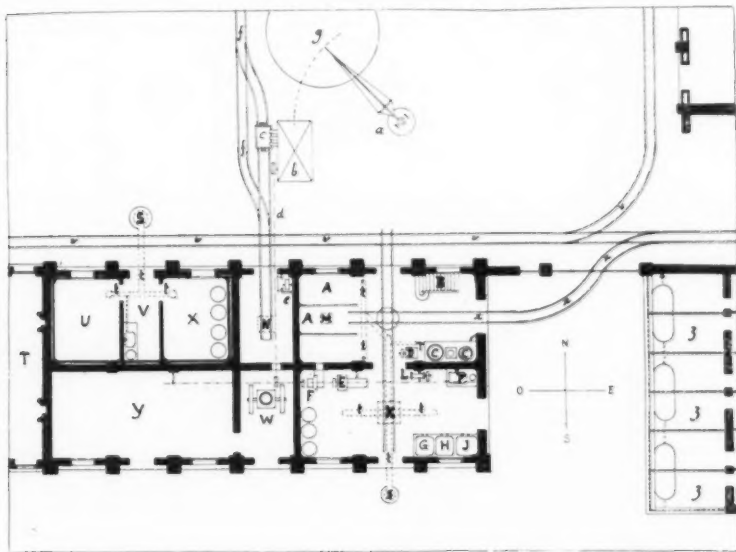


FIG. 9. MACHINE BUILDING OF THE FARM OF CERTES.

Figure 10 represents the cut of the machinery building, and calls for the following detailed explanation of this Figure 10: A, cases of fermentation; B' B'', transmission tree; C, boiler for the cooking of the food; D'', transmitting car; E F, root washing machine and root cutting machine; G, H, J, crushed cakes, the flattened grain and bran; K, straw mincing machine; L', sieve or dressing machine, removing the dust; M, trap door for the minced straw; N, threshing machine; O, bucket chain bringing up the grain; P, winnowing machine or mechanical apparatus to winnow the grain; Q R, cake crusher and grain flattening machine; S, trap doors for the products of the crushing and flattening machines, etc. The machinery is put in motion by means of a petroleum motor, placed in a special hall, which has no direct communication whatever with the other

parts of the building. By means of clutches and loose pulleys the working of the machines can be stopped without necessitating the stopping of the motor. The latter works on the ground floor; the root cleaner, E; root cutter, F; tuber crusher, D; a little windlass, L, which serves to get up the sacks of cakes; and, finally, a circular saw and a strapped saw in the carpenter shop. On the first floor the motor works the cake crusher, Q; a grain flattener, R; a straw mincer, K"; a dressing machine for the minced straw, L; a winnowing machine, P; bucket belt, O, for the raising of the grain.

Nothing special need be said of the other buildings of the farm of Certes, which is entirely surrounded and protected by large trees, as is shown by two small photographs in Figure 11, made while the work of building was in full force. As far as the residence of the proprietor is concerned, it is at a distance of several hundred meters from the farm, and, therefore, absolutely independent; consequently, we have no reason to deal with this.

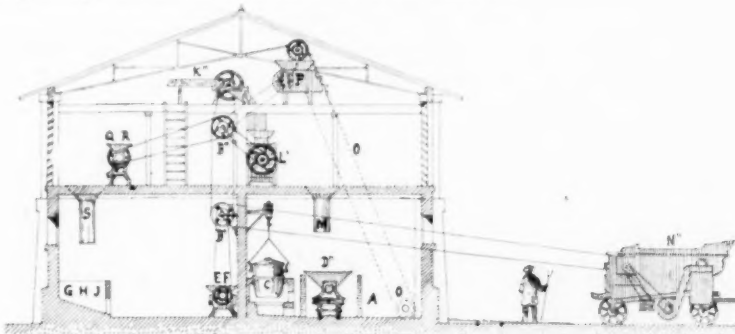


FIG. 10. SECTION OF THE MACHINERY BUILDING OF THE FARM OF CERTES.

We come now to the farm of Buisson, which will terminate this study. Situated at 21 kilometers from Paris, the farm of Buisson forms a part of the estate of Noisiel belonging to the Messrs. Menier. It is placed on an airy table land which commands the valley of the Marle, and from which one enjoys a splendid view. The buildings and yards cover a surface of more than 2 hectares. These buildings have been reconstructed recently on the site of an old farm, of which nothing remains but an old barn which was erected a century ago. Messrs. Menier, who have personally directed the construction of this new farm, have neglected nothing to make it a modern establishment, as nearly perfect as could be. When the proposed barn is constructed, the buildings will form a quadrilateral figure, as is shown by the general plan of Figure 12. To the right of the entrance are the dwellings of the farmers, A; then the dairy, B; the dining hall of the laborers, C; the laundry, D; the blacksmith shop, E. To the left of the entrance is the dwelling of

the superintendent and the office, F, with the scale, b, in the foreground; then the poultry house, G; in H is the large barn with the threshing machine, M; in I the hall for the carriages and materials; in J the stores, near which are placed the pugged ditches, K. The vast building which occupies the middle of the yard is divided into: The stable, L; cattle stable and cow house, M; sheepfold, N, and management rooms, O. In P are boxes for hospital purposes, or for animals which it is well to isolate—males, new born ones, etc. In Q is a stable devoted to heifers. In R are quays or platforms for the shipping or receiving of goods, or of animals in railroad cars. In e passes a rail. In S is the manure ditch; in T a pool of water, and in V another water pool, this last devoted entirely to the purposes of the poultry house. In X is the old barn, after which comes the place where is to stand the proposed barn, Y. To the left

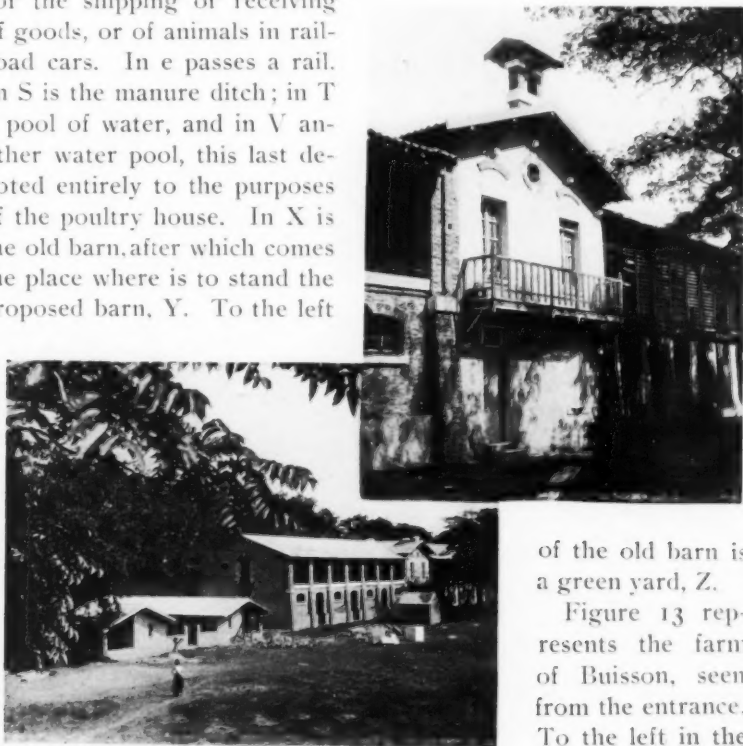


FIG. 11. THE FARM OF CERTES.

of the old barn is a green yard, Z. Figure 13 represents the farm of Buisson, seen from the entrance. To the left in the foreground is a pen for the cows and oxen. In the middle, opposite to the grating, are the large buildings serving as stables for horses, cattle and sheep. To the right and left are barns. Three farm roads lead to the farm which, as is shown by the telegraph poles, is connected by wire with the factory at Noisiel and with the whole system.

To the right of the superintendent's residence are placed the poultry houses (Fig. 14). These poultry houses unite the following conditions: Wholesome, well-aired rooms, the floor of which is covered with sand, mixed with pebbles, and roosts and laying places

in sufficient number; doors with apertures and ladders for the passage of the poultry into a special yard. It is not advisable to let the poultry mingle with the other animals. The laying places consist of square boxes made of white wood, measuring 35 centimeters on the side, and 10 or 12 centimeters in depth. They are provided with a little hay. The mangers are placed outside in the special yard in the shade, and protected from the rain. Let us note while here that among the material of the farm there is a rolling poultry house. This rolling poultry house is, in fact, an aviary in carriage form. After the grain harvest, it is filled with hens and conducted into the fields. During the day the hens pick the forgotten ears,

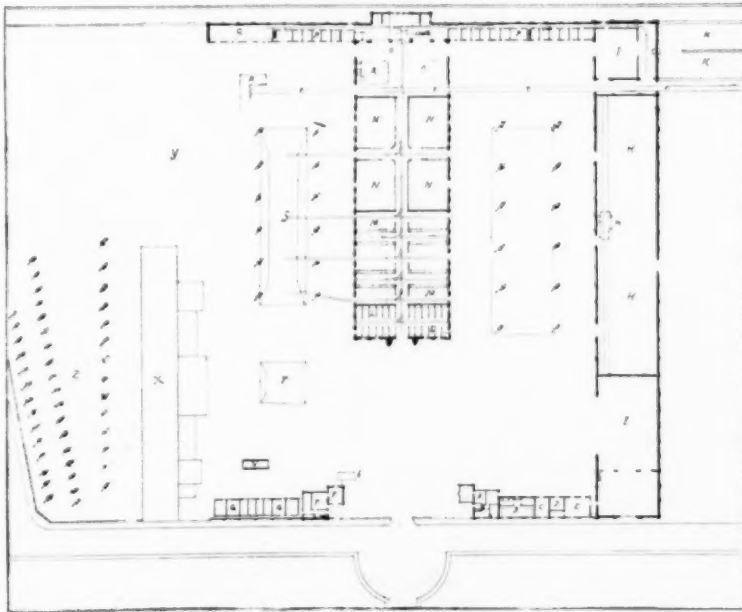


FIG. 12. PLAN OF THE FARM OF BUISSON.

and they come home at night in this poultry house carriage. When the hens have thus gleaned one field, they are conducted to another.

The following photograph, Fig. 15, shows the yard on the right, where the young oxen are just taking the air, guarded by their drivers. Opposite the dairy are the dining hall of the men, the laundry and the smithy; to the left, in the background, the hall for the carriages and material adjoining the large barn. There is nothing to be mentioned in this hall, evidently, except the agricultural implements, which are as numerous as they are improved. We have already mentioned the movable poultry house. Let us also cite eight mowing machines for two horses; six harvesting machines for



FIG. 13. THE FARM OF BUISSON SEEN FROM THE ENTRANCE.

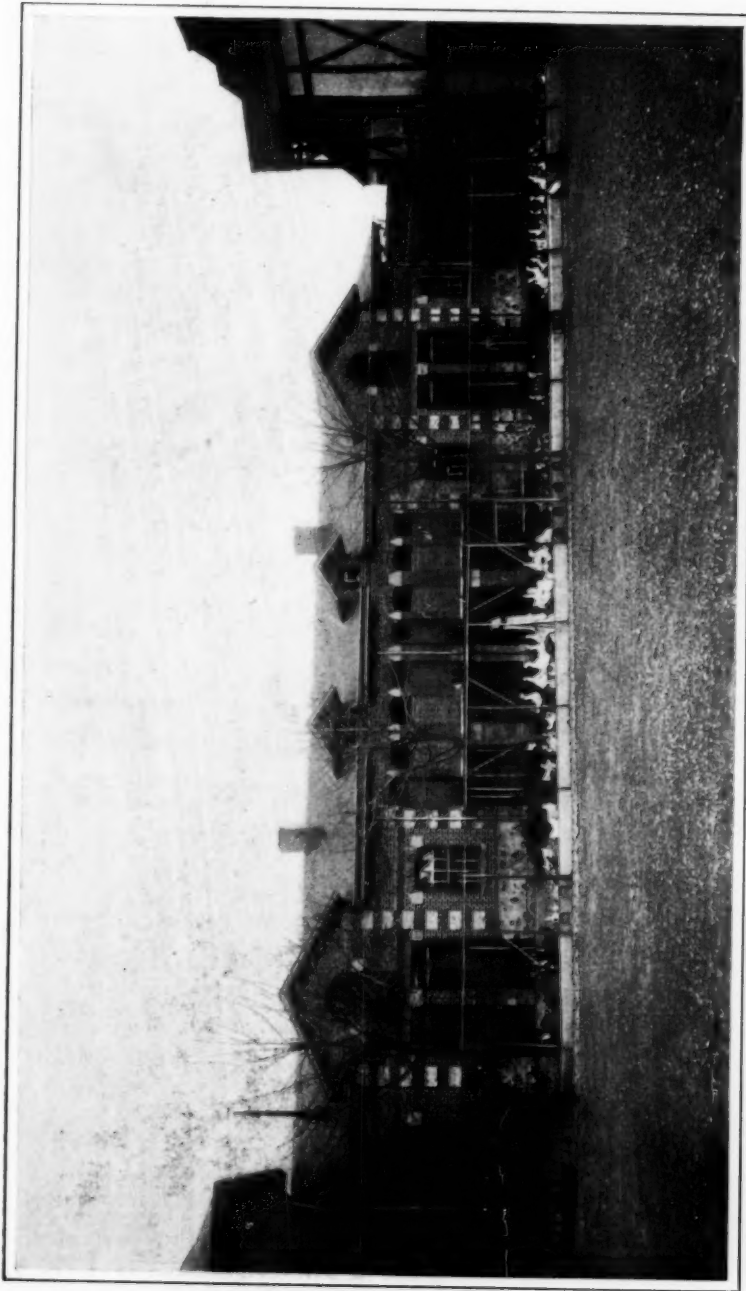


FIG. 14. THE POULTRY HOUSES OF THE FARM OF BUISSON.



FIG. 15. THE YARD OF THE FARM OF BUISSON.



FIG. 16. THE STABLES OF THE FARM OF BUISSON.

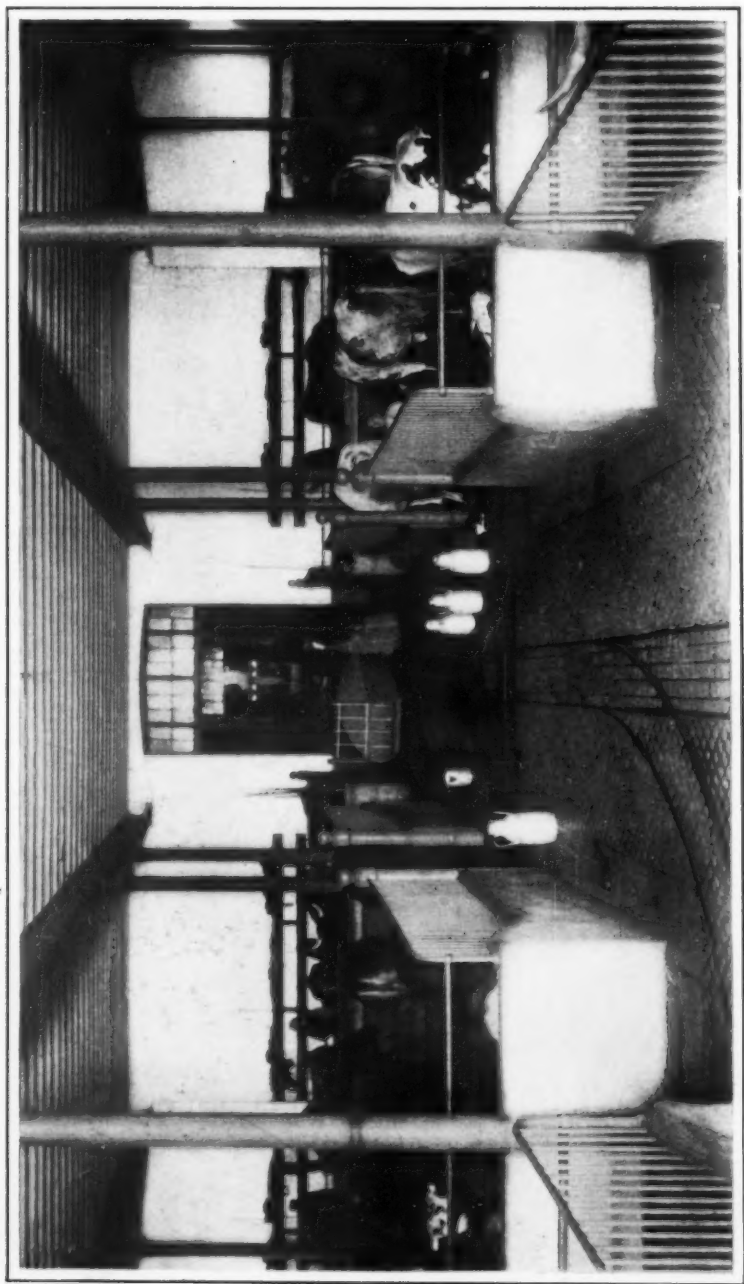


FIG. 17. THE COW-HOUSE AND THE OX-STALLS OF THE FARM OF BUISSON.

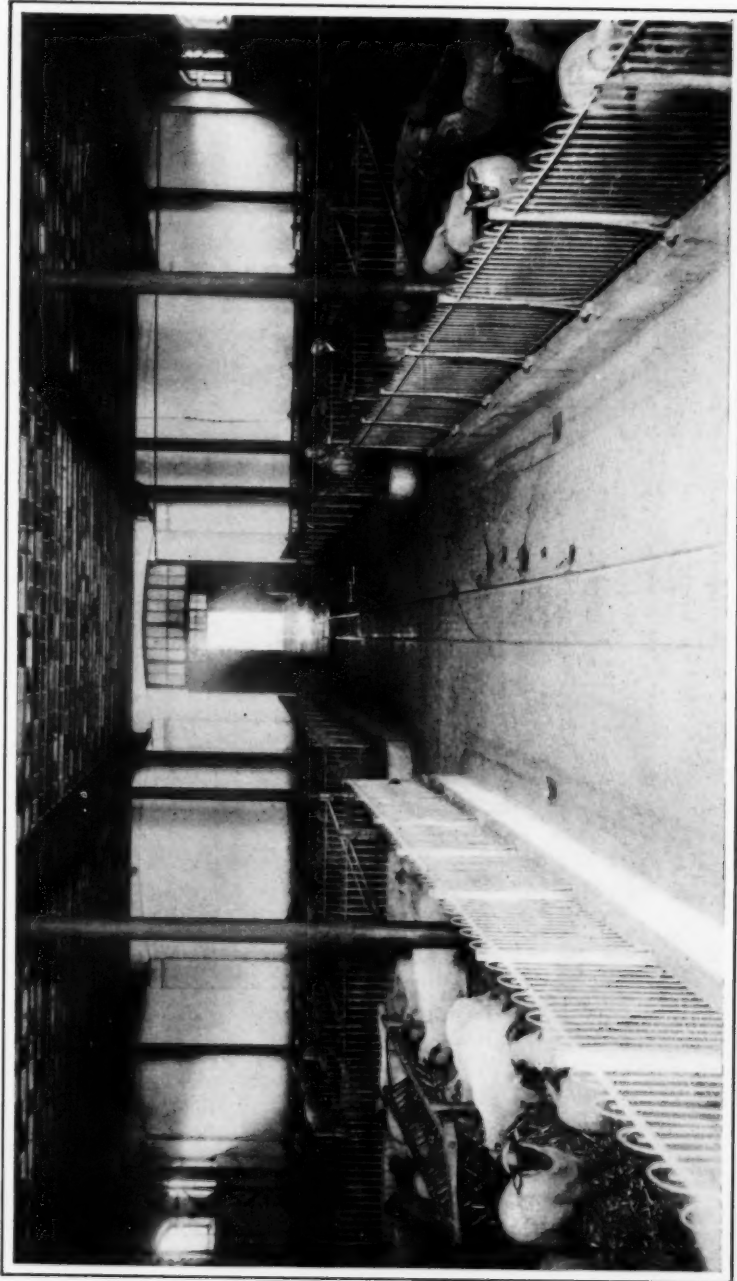


FIG. 18. THE SHEEPFOLDS OF THE FARM OF BUISSON.

two horses; two binding harvesting machines; four corn drills; four manure drills, etc., etc.,

Electric power is furnished by dynamos, fed by the water wheels of the fall of the Marle at Noisiel. The cables which bring the necessary electricity for the machine feed the electric lamps with which the farm is lighted, and work the material which we are going to see presently in the managing department. Parallel with the new barn, at a distance of 42 meters, and constructed on the same style, is a large central building which occupies the middle of the yard, and serves as stables for horses, cattle and sheep. This building has a total length of 85 meters. Its fine iron frame is composed of a series of 26 metallic frames joined together, each of which is of a length of 27 meters, and of a height of 13 meters at the top. The filled walls are made of bricks, manufactured on the very grounds of the estate. The stables, the cattle houses and sheepfolds are abundantly ventilated with a ceiling height of 5 meters, and present in their ensemble a total capacity of 9,000 meters. The interior fittings are of cement and iron, allowing everything therein to be kept in a perfect state of cleanliness. A double subterranean sewerage receives, by means of syphoid sluices the washing waters which are drained into a sewer, while the liquid manure is brought to a large cesspool placed under the manure platform. The cattle are attached to an iron shaft, which is handled from outside, so as to be able to detach all at once in case of fire. About 600 meters of rails assure by means of small cars the service of feeding and of litters, and they at the same time serve to feed the machinery which prepares the food for the cattle.

The stables (Fig. 16) placed in the foreground of the central building are of the two-row type with the heads towards the wall. This disposition, which is less employed than one of two rows head to head, is nevertheless preferable. It facilitates the service and, especially, the supervision. The divisions between the horses begin at a level with the litter. They are stationary, for it has been remarked that movable divisions isolate the animals imperfectly, and occasion accidents. These divisions were formerly made of masonry. To-day, however, they are made of wood, because they are thus stronger, while they take less room and can be cleaned more easily. The upper part is latticed; in other words, it is provided with an iron grating. The divisions terminate at the rear in cylindrical posts. The racks are of rounded iron. The divisions are also made in the manger itself, so as to avoid the animals biting each other. The mangers are of metal and rest on a strong wooden frame, so that, if the horse were to break the manger with a stroke of his hoof, the plank would still resist and prevent the horse from crippling itself. The lower part of the manger is hollowed out, so

that the horses cannot knock their knees against it while eating. On the walls, plates bear the name of each horse.

Our Figure 17 shows in a sufficiently precise way the cow house and ox stables and render it unnecessary for us to give a description thereof.

The sheepfolds (Fig. 18) are furnished in a very simple and yet sumptuous manner. It is certain that never were there sheep in France which found themselves better lodged or treated. In the back of the sheepfold the door which one sees opened conducts to the managing department or workshop for the mechanical preparation of the food. This mechanical preparation of the food prevails nowadays in a certain number of agricultural establishments. It consists of the division of the fodder, the roots and the tubers; the crushing and flattening of the grain, the grinding of the cakes and the cooked tubers, and the cooking of the roots and the tubers. This division permits the use of certain productions of mediocre quality which, otherwise, would be partly lost. The mechanical preparation facilitates the mixing of foods which, isolated, would be either refused or badly utilized by the cattle. It is thus that perfect alimentary rations are made by mixing the cut fodder with the roots delivered by the root cutter and the depulping machine.

We have seen that the machinery on the farm of Certes is operated by means of a petroleum motor. At the farm of Buisson the electrical transmission of the natural power finds a beautiful application. The machinery is driven the same as the threshing machine which we have described above, by a dynamo which receives the electrical power from a generator commanded by the fall of the Marle at the Noisiel factory.

Between the large central building and the large barn, and connecting them the one with the other to the south of the farm are a series of boxes with the pharmacy and infirmary for the cattle, whether sick or to be fattened, and also for the bulls and heifers. The stables of this beautiful estate possess a total of 60 draught horses, mostly of the Perche breed; the ox house, 80 draught oxen of Salers breed; the cow house, 80 cows, heifers and bulls of Norman, Flemish, Dutch, Swiss and Jersey breeds; and, finally, the sheepfolds hold no less than 2,500 sheep, rams, ewes and lambs of the half Merino and Berry breeds, crossed with rams of the Dishley and Southdown breeds; no pigs.

The water of the Marle is carried by pumps constructed at the Noisiel factory. The very complete canalization distributes it all over for the feeding and watering of the cattle, for the washing, and in case of fire. Moreover, springs flow on different points of the territory and furnish in all seasons excellent water.

Anatole Girard.



THE FIRST ELECTRIC MACHINE.
Built by Otto von Guericke, in 1682. (From a contemporaneous illustration.)



THE ATTRACTION OF AMBER.
Both from the Monochrome Frieze in the Edison Building, on Duane St., New York.
THE ANGER OF LOVE.
W. B. van Ingen, Designer.



MURAL DECORATION.

In the Residence of John A. Gilmore, Esq., near Philadelphia, Pa.
W. B. van Ingen, Designer.

WILLIAM B. VAN INGEN, MURAL PAINTER.



THE Union Club in its new home on Fifth Avenue has the upper walls of a dining-room decorated with an Alpine landscape in low tones of green and browns above a carved dado of stained oak. It is by a young painter who has had the advantage of working with two of the most successful masters in decoration: John La Farge and Louis C. Tiffany, thus serving an apprenticeship which has

been long and laborious, but has given him a command of resources that is rare among American artists.

The exclusive attention paid by our painters to easel pictures, which was the direct and indeed inevitable consequence of a lack of demand for mural work, has left the greater part of them in the embarrassing position of being unprepared for the problems that meet the man who has to incorporate a picture with a wall on the lines of a given scheme of decoration.

Years of training and an exceptionally ready mind are needed to grasp the difference between the independent easel picture in a frame and the dependent mural painting which is part of the house itself. As the demand increased, and stained glass windows, mosaics and large wall-paintings were required, our younger artists had a chance to grapple with serious questions of color, composition and harmony, of the relation of decoration to the architectural scheme and a hundred other matters from which the easel painter is usually free.

The task set Mr. van Ingen in the dining-room at the Union Club was peculiar in this, that whereas figures are usually demanded of an artist—some story or allegory, something historical or legen-



AJAX DEFIES THE LIGHTNING.
Monochrome Frieze in the Edison Electric Building, on Duane St., New York.

THE LAWS OF WISBEY.

W. B. van Ingen, Designer.

dary in this case, the call was for a frieze of landscape only, and one which dealt with mountain tops, one having its horizon line far below the normal point for the view of persons in the room to be decorated. By treating the landscape as if it were a series of views on hilltops, the lower part of which was screened by the dado from sight, Mr. van Ingen has produced a striking effect with very simple means. Clumps of stone, pine, chestnut, willow and other trees alternate with upland slopes, crags and rolling clouds, offering great variety and producing somewhat the effect of tapestry without any realistic attempt to imitate tapestry. At first glance these walls might seem easily clothed with cloud and hill forms, but after a moment a certain impression of grandeur is made, partly through the sternness of the subject, its absolute freedom from human figures, but also because of the repressed color scheme which lends it a quiet decorative dignity that adds to the effect.

Mr. van Ingen's monochrome frieze for the Edison Electric building in Duane Street was another instance in which the artist had his field limited for him at the start. The subjects for his panels were left to him, but the absence of colors was dictated. In this frieze he has taken up electricity ab ovo — from the egg-shaped weight of amber that kept the thread taut as it hung from the distaff and by its surprising electrical properties in attracting fluff and dust caught the



SIR HUMPHREY DAVY MAKES THE FIRST ELECTRIC ARC LIGHT.

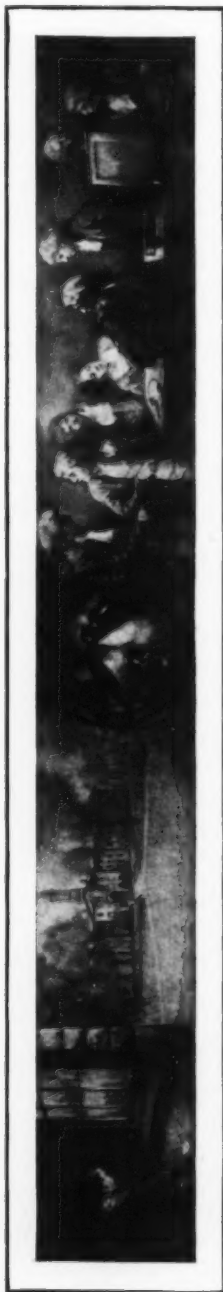
FARADAY AND THE ELECTRIC MOTOR.



FRANKLIN'S KITE.

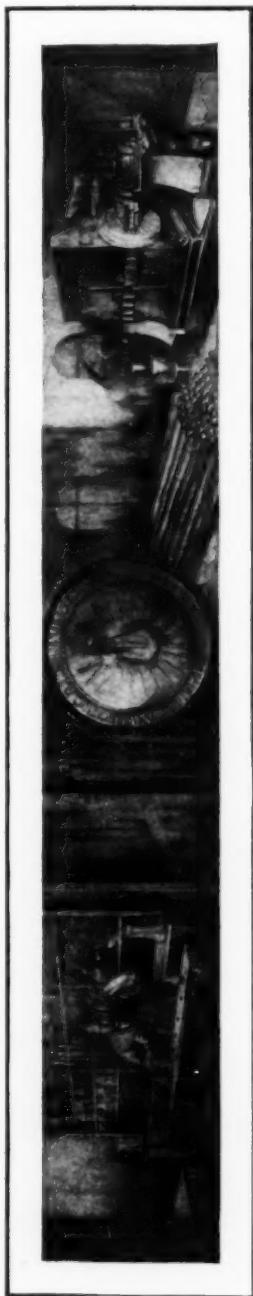
DR. GILBERT AND THE LODESTONE.
W. B. van Ingen, Designer.

Both from the Monochrome Frieze in the Edison Building, on Duane St., New York.



JOSEPH HENRY AND THE TELEGRAPH.

VOLTA AND GALVANI.



EDISON IN HIS LABORATORY.

Both from the Monochrome Frieze in the Edison Building, on Duane St., New York.

THE "JUMBO" DYNAMO.

W. B. van Ingen, Designer.

attention of a child and then of older persons—to the laboratory of to-day in which Thomas Edison is at work on electrical inventions. Here is the kite of Franklin and there the telegraph of Joseph Henry. Yonder we see the punishment of the sailor on a ship from the Hansa towns who has “monkeyed with the compass;” he has one hand nailed to the mast with a dagger. The problem of dealing with these and other historical and legendary matters relating to electricity, with no range of colors to give the frieze life, was solved by van Ingen with a certain zest.



MOSAIC.

In the Entrance Vestibule of the U. S. Mint, Philadelphia, Pa.

W. B. van Ingen, Designer.

More grateful was the vehicle in the case of the mosaics for the Philadelphia Mint which he designed for the Tiffany Glass Company. Here also there were more interesting wall spaces to fill. Theme of coinage and minting are treated in a light vein, little girls being figured in the place of workmen, whether hammering the metal or smelting it or striking the coin, somewhat in the same spirit of gayety as the old Greek or South Italian who at Pompeii painted groups of cupids indulging in the labors of the coiner and



In the Entrance Vestibule of the U. S. Mint, Philadelphia, Pa.

MOSAIC.

W. B. van Ingen, Designer.



In the Entrance Vestibule of the U. S. Mint, Philadelphia, Pa.

MOSAIC.

W. B. van Ingen, Designer.

goldsmith. Some of these little girl figures will be remarked for the excellent drawing, the natural and vigorous action they display. They wield with their little hands the heavy tongs and pinchers before the fires, or, perched on workbenches, laboriously ply the tools. The effect is produced by the contrast between their young faces and figures and the unwonted surroundings of forge and machine shop.

Among his works painted for a special interior, to suit the coloring of a particular room is the "Evening and Morning Light" executed for Mrs. Spencer Trask, very noble and spacious, full of grace and calm, the two figures symbolical of dawn and twilight seated in thoughtful and thought-compelling attitudes in a finely composed landscape. Sentiment of a less obvious sort is seen in the picture of "Love and Grief," . . . two clasped figures in flowing robes, the original belonging to Mr. George Foster Peabody. . . . What may be particularly noted in these "easel" pictures is the large decorative line, the masses, the something that speaks of the artist who deals with figures in a non-realistic, decorative way as the old Italian painters did. After his own fashion, and gauging his own gait, Mr. van Ingen is working out a style of his own which is an imitation neither of La Farge nor Tiffany, still less of any foreign master, but the result of a very wide experience and a constant study of his profession.

The demand of Mr. C. T. Yerkes for a room done in the Japanese fashion gave van Ingen an opportunity which he did not neglect. He went to Japan, and, after studying the art of that surprising people for a period all too brief, returned to New York with Japanese workmen and constructed the room on the lines of certain apartments in one of the greatest and oldest of Buddhist temples. The taste, skill and traditional cleverness of the Japanese find in him a great admirer. He has studied and published his conclusions regarding the perspective employed by the Chinese and Japanese, defending it against the common charge of illogical whim, and showing that our perspective, no more and no less than the Oriental perspective, is a convention. So great is his admiration for the Japanese, not merely as the makers of marvelous lacquers and bronzes, textiles and pottery, but as artists who felt exactly how much decoration was needed, where to put it, and what should be the limits of endeavor! As he works in his studio the volumes reproducing the drawings of Hokusai, "the old man crazy about painting," lie on his study table for ready reference. A little thumb nail sketch by Hokusai will often suggest a way to solve a problem which deals with something apparently very different.

Mr. van Ingen was one of those who decorated the Library of



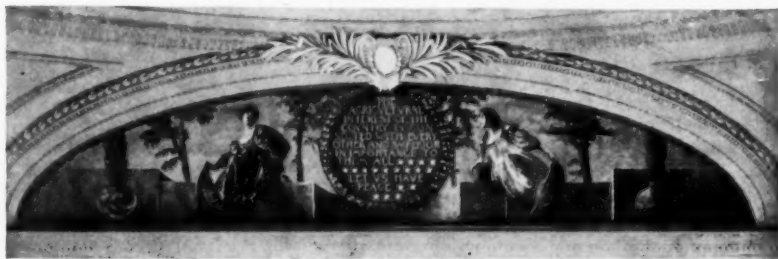
EVENING AND MORNING LIGHT.

Decoration in the Residence of Spencer Trask, Esq., at Saratoga, N. Y.
Copyright, by Curtis & Cameron, Boston, Mass.

W. B. van Ingen, Designer.

Congress, and here again he had to follow orders instead of being left to his own devices. Artists chafe at such things, but they are not always bad for them. At any rate, the necessity of exerting their wits to meet such an emergency gives them practice in the very line along which the mural painter must labor if he is to satisfy the requirements of to-day.

It is a common complaint nowadays that our art schools do not take the place of the simpler and slower methods of the Middle Ages, when there were no lectures on the history of art and no clever teachers of drawing, painting and modeling in clay, no lessons in artistic anatomy and the philosophy of art. All that our poor ancestors had was an apprenticeship to some more or less famous master who might or might not have the faculty of imparting knowledge, might or might not be anxious that his pupils should learn all he knew. The present system seems far better, because



DECORATION.

In the New Library for Congress, Washington, D. C.

Copyright by Curtis & Cameron, Boston, Mass.

W. B. van Ingen, Designer.

instruction is more varied and the pupil has a number of teachers, one of whom may help him if the others fail. But somehow the apparent superiority of our system does not produce great results. In fact it appears necessary now that the graduate of the art school should in some way supply for himself the apprenticeship no longer in the fashion of the time, often laboriously unlearn what he has acquired in the art school and start at the foot of the ladder as a humble imitator and assistant of some successful artist. It is only another way of saying the old saw: "Art is long."

Mr. van Ingen is a Philadelphian by birth and studied at the schools of the old Pennsylvania Academy of the Fine Arts; indeed, he is president or vice-president of the Alumni Association of those schools. So he has had the ordinary experience. But would we have heard from him if he had launched himself at once as an artist on his own feet, after the obligatory year or two in Paris? His years with La Farge and Tiffany have taken the conceit of the art-



FIGURE FROM A WINDOW IN CHRIST CHURCH.
Media, Pa. W. B. van Ingen, Designer.

school graduate away and replaced it with a workmanlike ability to express himself on a broad scale, get the design wrought out which belongs to a given interior and then produce the enlarged picture or frieze, with a mental image of the place it is to occupy always controlling the brush. Hence it is that there is something alive and direct and masculine about his work, which strikes one forcibly, even if the color, or the composition or the way of telling a story may not entirely please. His work is far from faultless; but it does not worry you with its detail, its labored exactness, its preciousness. The general impression is rather a failure to say all that he could say, were he a little more facile and supple in mind. After all his study and working out of the ideas of others, and after the later work on his own themes, there remains a certain awkwardness—or call it amateurishness—at any rate the reverse of that smart, easy-flowing dexterity we often see in our



DECORATION.

In the New Library for Congress, Washington, D. C.

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W. B. van Ingen, Designer.

young returned natives, after they have absorbed skill o' the brush for a year or so from some master across the sea.

The defect mentioned may be, for all we know, a negative virtue, for along with it goes an impression that van Ingen has only begun to say his say. He is still stuttering and stammering, still groping, still uncertain of his gait. It is a question of his mental stamina, his artistic power of endurance, his ability to work on despite discouragements that come from a realization of the difference between what he can do now and what he sees ought to be done. In other words, he is still a beginner, still a man of promise and his future depends on a steady perseverance in the big view of painting, which the covering of large spaces breeds in artists who use their brains instead of tamely surrendering to realism as the sum and substance of art.

Stained glass is a branch of the arts that has a powerful training in it, because it forces an artist to use his imagination while

translating the design into the glass, drills his eyes in fine color distinctions and accustoms him to consider figures and trees and landscapes in broad masses, while paying the utmost attention to line. It is the reverse of realistic, depending primarily on the color to a far less degree on the line, and least of all on closeness to fact. It is a branch for "primitives" and, indeed, came to its highest expression when the primitives were painting their altar pieces. Not without influence on his work has been Mr. van Ingen's earlier practice in stained glass, when he had to put into a cartoon the color sketch made by himself or some one else, and then watch the glassman translate the cartoon into color with the guidance of the colored sketch. Later on he made windows of his own for Philadelphia, New York and other cities, both religious for church and chapel and secular for private houses.

Mr. van Ingen is an artist slow to develop and only advancing by wrestling with ideas until they are his own. He is an independent thinker and disposed to reject what he cannot understand, demanding a close accounting for everything that an artist does. This is in itself a form of realism, it denotes the positive if not the pessimistic mind; yet along with this excessive literalness, as opposed to the flowing thought of the poetic temperament, there goes a certain form of imagination which rescues him from dryness.

For one thing van Ingen is fond of nature in its big decorative effects and haunts the parks and when he can the country. His morning trips through Central Park have made him uncommonly well acquainted with that place of recreation; perhaps no one has appreciated better than he the artistic merits of Central Park; no one admires more the work of Olmsted and Vaux. On many a frieze, in many a mural painting the lessons learned in Central Park have had their echo and fruition, not at all in the sense that he has copied bits of Central Park or reproduced its vistas or tree masses, but in the sense that the clever planting of the Park has suggested to him certain compositions which he has carried out in his own way.

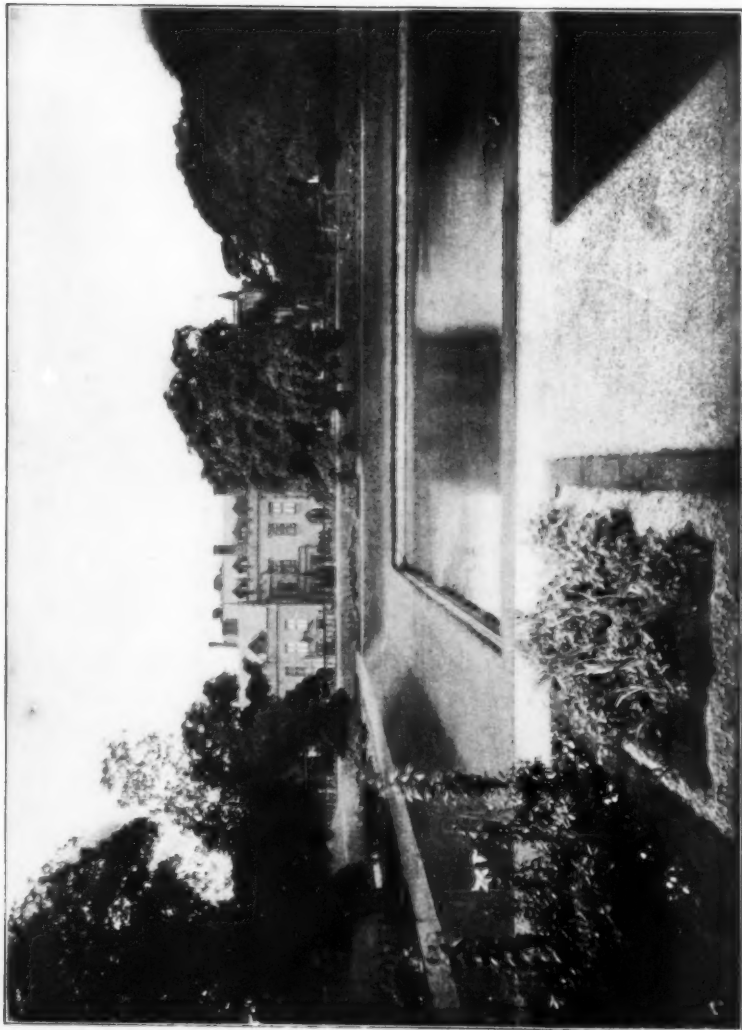
What van Ingen needs to develop his talent is the responsibility to produce the entire decorations of a large building or a suite of galleries. He is one of the few artists to whom such a task might be entrusted with a certainty of the original and successful carrying of it out. His attack of the subject is bold and candid, his sketches carefully wrought, his brushwork adequate. Without having the ear marks of a great colorist, he understands color intellectually and supplies the warmth of the natural temperament in the colorist by taste and feeling. Following the path he is now treading he is likely to reach abiding fame.

Charles de Kay.

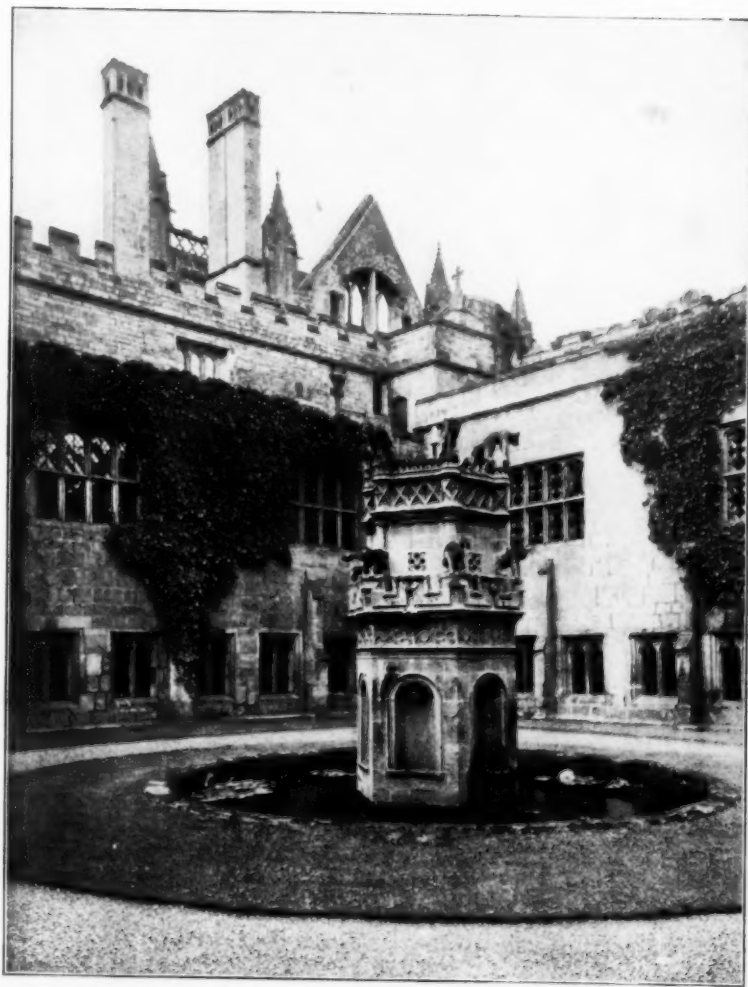
✓ "ENGLISH PLEASURE GARDENS"—A REVIEW.

ENGLISH gardens are distinguished from those of continental Europe, because they have had a continuous existence and history since the Tudor period. Italian gardens were at their best late in the 16th and early in the 17th century; but thereafter they declined just as all Italian art declined. During the 18th century the local and the cardinal princes maintained them; but they did not build new ones; and during the 19th century they have scarcely been kept in repair. The French garden reached its consummate expression in Versailles late in the 17th century. The Crown so completely overshadowed French life at that time and during the 18th century that the royal gardens are something more than royal; they are also national. But since the Revolution social and economic conditions have not favored in France the laying out of new and elaborate gardens. Such gardens are a luxury, to be enjoyed only by the very rich, and French wealth tends to be distributed rather than concentrated. Moreover, French people, while they love the country and delight in flowers, are so social that the characteristic expressions of their modern life are urban. They have made Paris something both of a garden and a park, but individual Frenchmen have rarely indulged in elaborate formal gardens for their personal pleasure. In England other conditions have prevailed. Ever since Tudor time there have been resident on the soil an energetic and efficient aristocracy and landed gentry, who were to a greater or less extent the real leaders of the country. They have for the most part been prosperous and progressive, living on their estates and adapting their social habits to country life. Consequently throughout the whole of this time old gardens have been altered and new ones built; new ideas and influences have been constantly creeping in; and at the same time the conservative habits of England, the continuity of its life and the comparative absence of revolutionary and military disturbance have all contributed to the maintenance, almost unimpaired, of their magnificent heritage of gardens. There is no parallel in England to the partial decay and ruin of the great Italian and French gardens (for Versailles has not been kept up as it should be under the Republic). Englishmen either maintain or improve, or they destroy. It is true that their improvements are of the more destructive than the negligence of Italians; but it is at least the evidence of a fresh and living interest.

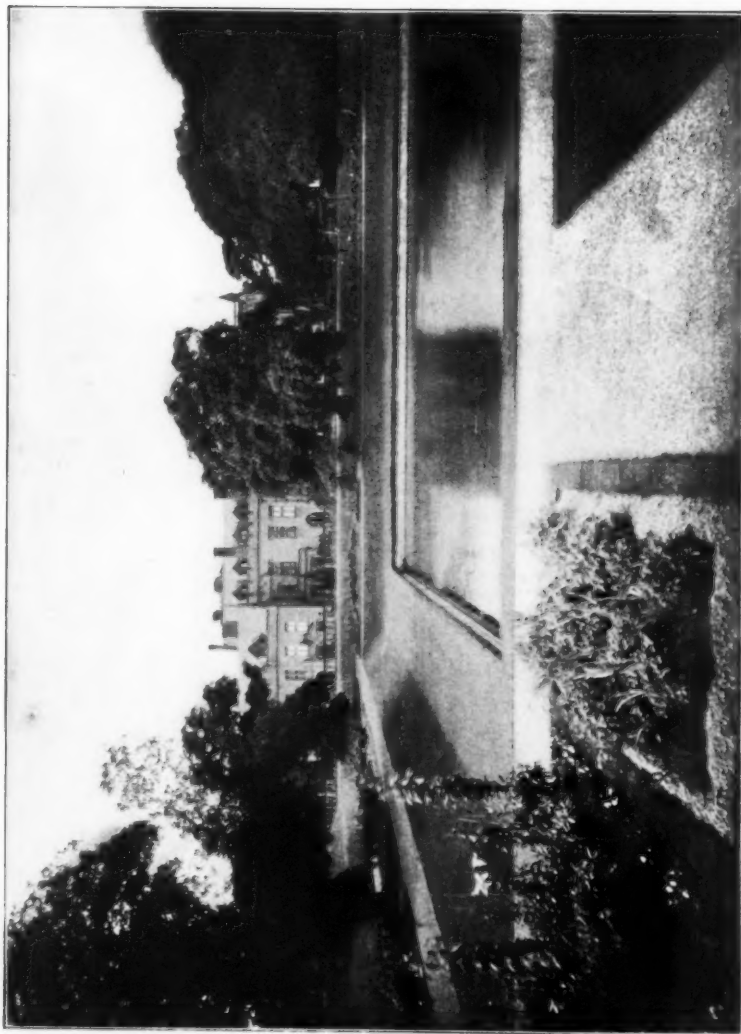
It is the peculiar merit of the book of Miss Rose Standish Nichols on "English Pleasure Gardens" that it places before American readers a comprehensive and consecutive account of the gradual



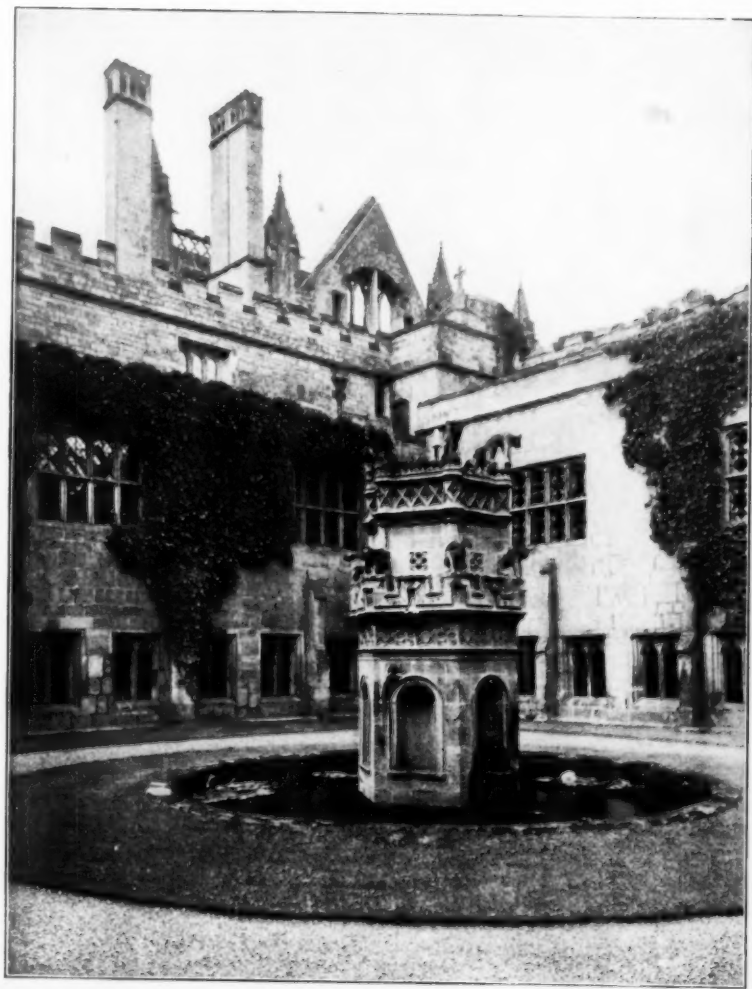
EAGLE POND, NEWSTEAD ABBEY, NOTTS.



THE CLOISTER-GARTH, NEWSTEAD ABBEY, NOTTS.

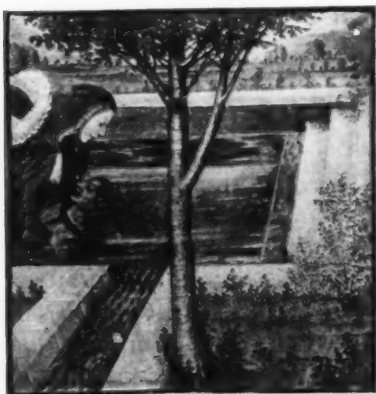


EAGLE POND, NEWSTEAD ABBEY, NOTTS.



THE CLOISTER-GARTH, NEWSTEAD ABBEY, NOTTS.

changes which the art of landscape gardening has undergone in England since the time that country was a Roman province. It does not enter into competition with the elaborate and exhaustive books of large plates, which appeal chiefly to professional architects or wealthy amateurs. It is rather a book for the much larger class of people, who, either because they have laid out or expect to lay out gardens of their own, have an intelligent interest in garden history, and would like to satisfy it at a comparatively moderate cost. In the majority of distinctively architectural books the plates are the main thing; and the text is included merely as a sort of footnote or necessary explanation to the illustrations. In Miss Nichols' book, on the other hand, the pictures illustrate the text instead of the text explaining the pictures. The illustrations are, that is, selected from the vast number of possible gardens, because they

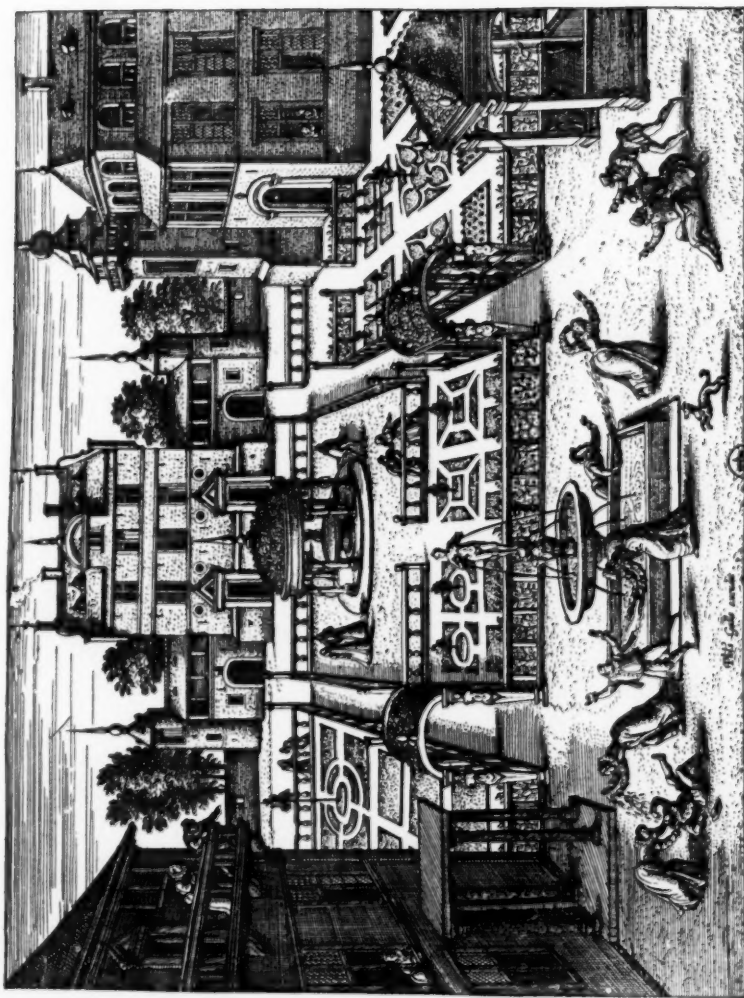


GARDEN SCENE FROM THE ROMAN
DE LA ROSE.

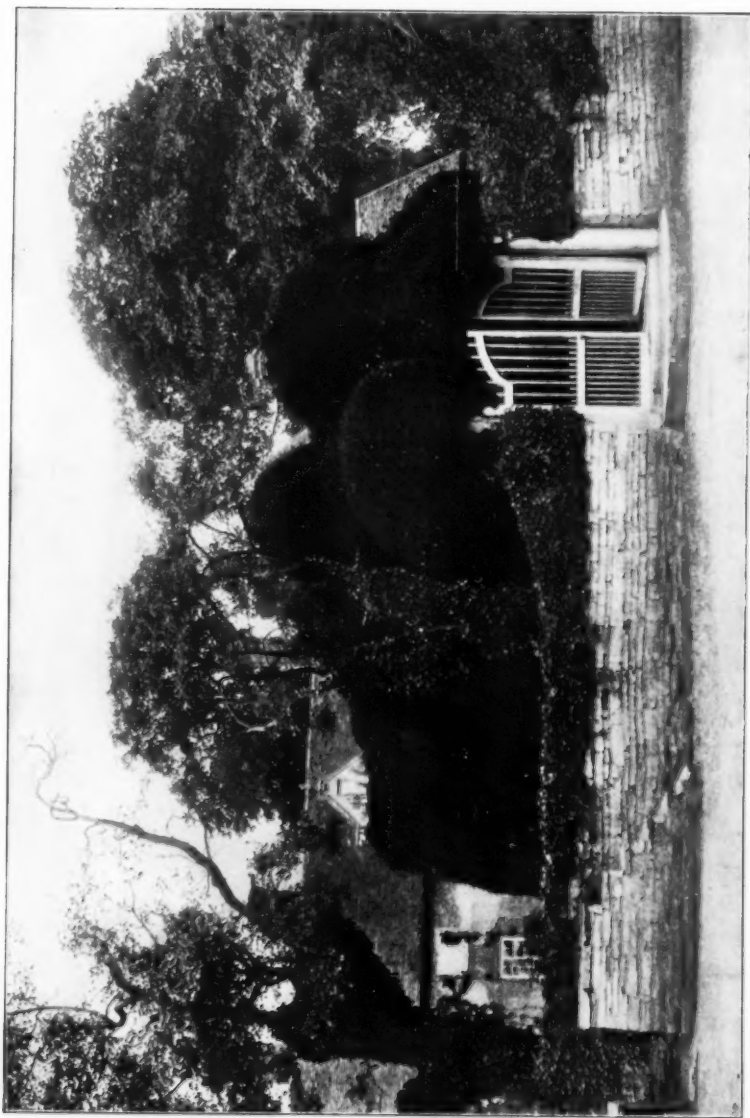
are peculiarly typical of some phase of garden history, which is explained in the text, and they are undoubtedly very admirably selected both for this purpose and in general for the intrinsic merit and charm of the places illustrated. It is unfortunate that so many of them are half-page rather than full-page plates, because they lose much of their effectiveness, owing to an excessive reduction in scale, but allowance must be made for the desirability of including in a book of this kind a good many more illustrations

than there really is room for. The text of the book, on the other hand, which, as we have said, is the main thing, has the merit of being simply and unpretentiously written. Gardens are frequently such a very fertile source of literary cosmetics that the plain statements of facts and tendencies, which this book contains is both a negative relief and to some extent a positive pleasure.

Miss Nichols is particularly happy in her account and her illustrations of the Roman and mediæval gardens. We doubt whether anybody has brought together before so many interesting illustrations of mediæval gardens, derived from collateral sources. Tapestries, paintings, and books all of them contribute to the illustration of this remote part of the subject. Of the gardens themselves nothing very authentic remains. The plates include the cloisters and courts of one or two Italian and Spanish abbeys that



ELIZABETHAN GARDEN, FROM VREDEMAN'S "HORTORUM VIRIDARIORUMQUE."



CLEVE PRIOR MANOR.

have come down, the Gothic Fountain in the Cloister-garth, Newstead Abbey and Eagle Pond on the same place. The Gothic Fountain is, however, only a reproduction, and, although Eagle Pond is said to be unchanged, the details of the surroundings are so altered that the picture does not help very much to restore the conventual garden. Among the gardens belonging to lay proprietors Penshurst is stated to be the most satisfactory survival—in spite of the fact that it was replanted about fifty years ago.

The actual development of the modern English garden began during the Tudor period. Just as during the reigns of the Tudor monarchs the social and economic conditions of the middle ages passed away, so the mediæval houses and gardens were succeeded by different and freer architectural and landscape designs, which, however, still contain survivals of many mediæval characters. In the beginning, for instance, both house and garden were protected, not only by walls, but with a moat. Gradually, however, battlements, moats and other defensive accessories ceased entirely to be built in connection with the house, and in respect to the garden were retained only to secure them against intrusion and depredation. Some of the moats still remain as at Losely, Hunstanston and Helmingham. The gardens of this early period were for the most part unpretentious affairs. "Briefly," says Miss Nichols, "the garden was now a homely enclosure like the living room in a simple house, containing few but good-sized apartments." Among existing private pleasure gardens, the one most resembling those described as belonging to the early Tudor period is at Longleat. "Symmetrical without being monotonous in its plan, formal without being rigid in its planting, cosey without being cramped in its dimensions, it might be cited as the perfection of a small out-of-door dwelling-place for plants and people." As with everything else, however, the Tudor garden reached its completest expression during the reign of Queen Elizabeth. This was the period in which many of the finest houses in England were built, and fine houses necessarily bring with them, of course, some kind of landscape gardening. "Cautiously the idea was introduced at this time," says Miss Nichols, "that a thing of beauty might be an excuse for itself, and this led to the garden of pleasure or flower garden. But orchards, herbaries and kitchen gardens were not done away with, and at the outset even the pleasure garden was excused as having a useful side." Garden literature of all kinds suddenly increased to an extraordinary extent, and, like the other science and conscious art of the period, tended to be imitative, but the actual gardens laid out were original and were admirably suited to the English soil, climate and manner of life. Notwithstanding the changes that have since take place in the gardens, such as at Levens, Bramshill and Mon-

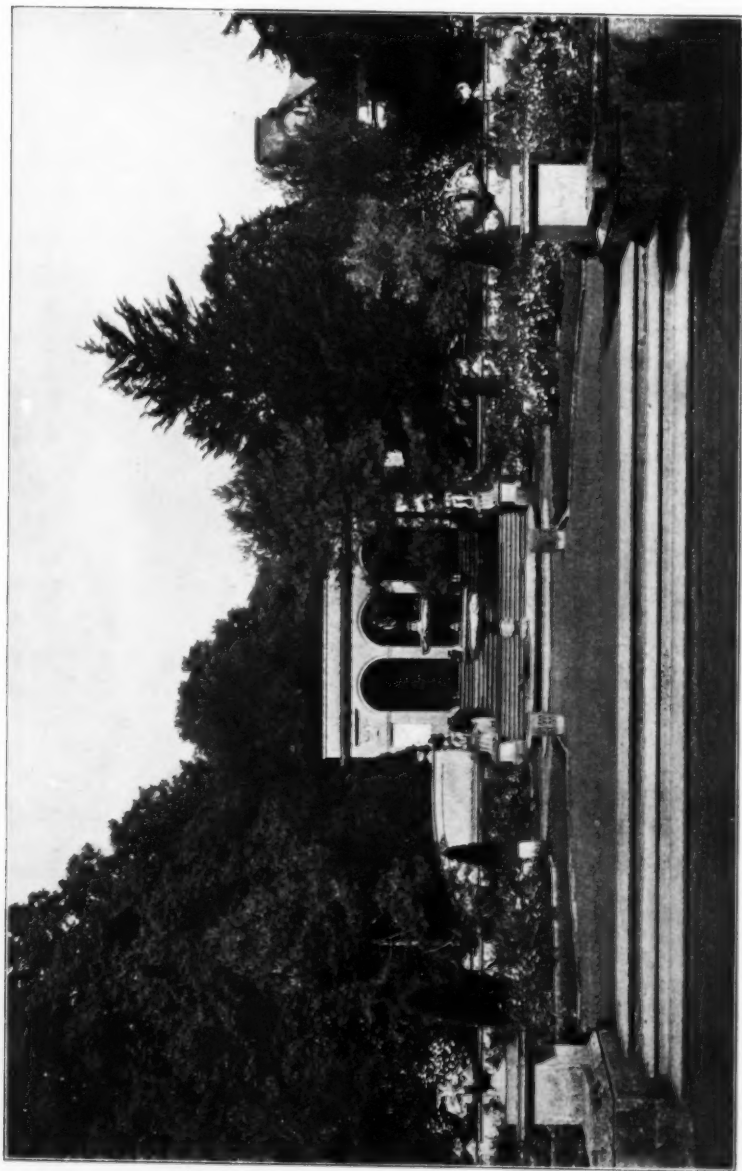


TREES AND WATER, BRAMHAM, YORKSHIRE.

tacite, laid out at the period, reconstruction is comparatively simple, because of the abundant contemporary literature about them. The following facts may be noted. At the entrance to the house was generally a forecourt. The gardens themselves were always connected as closely as possible with the house. The form of the outer enclosure was generally rectangular; and a series of terraces was frequently used. The most characteristic boundary of the Elizabethan garden was a sort of open-work stone balustrade either placed directly on the ground or surmounting a wall of stone or brick. A terrace was usually immediately connected with the house, on a level of at least three feet above the level of the gardens. Arbors, garden-houses, and banqueting halls were among the architectural features of the plans, and there were few of them that did not have a fountain. Bathing-pools, fish-ponds, tennis courts, orchards and kitchens were generally included somewhere in the lay-out. The planting gained much in variety through importations from the new world. Decorative details were influenced by the usual Renaissance and Italian motives, but in its large outlines and characteristics the Elizabethan garden was as native English a product as was the Elizabethan domestic architecture.

After the Elizabethan period English gardening came more and more under the influence of continental forms—at first in details and finally in plan. Both the Italian and French styles had most important effects. Le Nôtre himself is supposed to have designed the plan of St. James' Park and of alterations at Hampton Court, while other English gardens which show French characteristics are Chatsworth, Bramham and Holme Lacy. Of these Bramham in Yorkshire is the most extensive and in certain respects the finest specimen of the French style in England, containing as it does a forest of magnificent trees pierced with broad avenues, extensive water-works, a long canal, and many beautiful vistas frequently terminated with handsome vases. As for Italian designs, one of the oldest of them was carried out at Wilton for the Earl of Pembroke by Isaac de Caux. The Villa d'Este furnished some of the ideas so successfully carried out at Shrubland Park, while others that may be mentioned showing similar influences are the gardens at Harewood, Castle Ashby and Longford Castle.

The English, however, are not so successful in assimilating borrowed ideas as are the French; and during the 18th century the formal garden in England degenerated into a rigid and meaningless convention. It was natural consequently that it should feel the effect of the revolt against classic formulas, and the attempted return to native feeling and natural forms, which infected literature. It was natural, also, that one extreme should be succeeded



CASINO, WILTON, WILTSHIRE.

by another, and that the over-rigidity of one style should be succeeded by a style which attempted to do without geometrical forms at all. This revolt against classical symmetry and balance was not confined to any one country; but in England only did it have any lasting effect upon the landscape gardening, and there for the most part an extremely unfortunate one. Designers like Kent and "Capability" Brown were really affecting an unaffected treatment of nature, and were unfortunately obliged to destroy many of the most beautiful of the older gardens in order to lay out their "smooth lawns of grass, diversified by clumps of trees and intersected by curved paths or irregular pieces of water."

These excesses, however, founded as they were upon a notion of the "picturesque" in nature, which was as artificial as the worst extremes of formal gardening, were succeeded during the 19th century by a comparatively moderate version of "informal" gardening. This version, the originator of which was Mr. W. Robinson, was really more concerned about garden planting than about garden design. What Mr. Robinson terms the "wild garden has no connection with the wilderness, though it may happen to be carried out there; and it does not necessarily mean the picturesque garden, for picturesqueness may exist on a cultivated plot of ground. The main object is to make the plantation look natural and at the same time to group the plants gracefully," and the means used are the substitution of the hardy old-fashioned perennials and annuals for the troublesome and expensive bedding out of green-house plants. There is fortunately a certain tendency among the better contemporary English designers to use in combination with a desirable formality in design this informality and naturalness in planting; and should this tendency come to prevail the extravagant extremes of picturesqueness and rigidity which have characterized English gardens of the past two centuries may be succeeded by something like an intelligent and fruitful convention. It is one of the most useful results of the study of such a book as Miss Nichols, and of garden history generally that all this experimentation has for the discerning mind a very definite issue—an issue in which the Italians may be said to have anticipated three centuries earlier with the usual direct and pertinent vision of a really artistic people. Their best gardens were formal in design, as all elaborate gardens around a house should be; they derived a large part of their dignity and beauty from the skillful use of architectural and sculptural forms; yet they were instinct with open-air feeling, and were as far as possible removed from a mere "outdoor room," which seems to some people the proper formal garden. They would have to be modified in many essential respects, in order to adapt them to the modern American



PAVILION, AUDLEY END.



PICTURESQUE PLANTING, ASCOT.

country house and life; but they remain the best models for the sympathetic attention of contemporary designers.

In conclusion, one cannot help wondering just where the elaborate formal garden will find its place and level in American life. Small gardens will, of course, be found wherever people of moderate means take enough interest in the cultivation of flowers and in the embellishment of their country places to spend all the necessary money and time; and they are undoubtedly now being made in large numbers throughout the eastern states. But magnificent and elaborate gardens that make an appropriate environment to the "chateau" or "mansion" of an American millionaire—what root will it strike in the American soil? Such gardens are, of course, the final flower of aristocratic life, and are capable of being really enjoyed only by a very wealthy leisured class, who live much of the time in the country, and find such surroundings congruous with their social occupations and the pleasant æsthetic inconsequence of their lives. They scarcely seem to be a proper background for the busy, noisy and athletic diversions of a contemporary American house-party with its mechanism of flannels, automobiles and Bridge. The more elaborate formal gardens, recently planned or carried out in this country must consequently be classed with the spoils of Italian palaces and the other paraphernalia of European aristocracy, wherewith the rich Americans are disguising and bedecking their "newness;" and in the meanwhile the real progress in American garden design is likely to be made in the laying out of the less pretentious places noticed above.

A. C. David.



GARDEN PIECE FROM ROMAN DE LA ROSE.



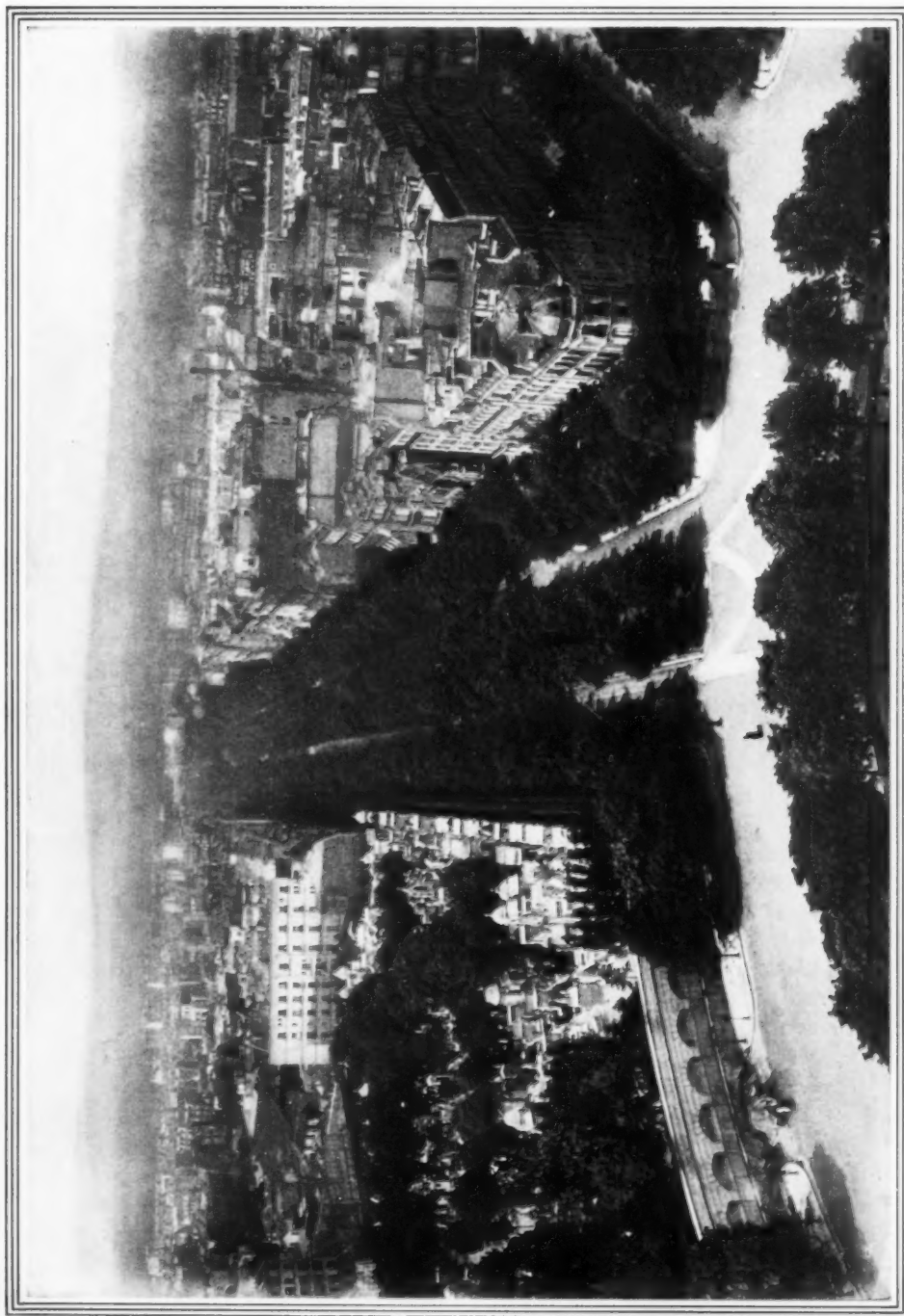
THE TROCADÉRO FROM THE PLACE DU TROCADÉRO.

LIVING IN PARIS ON AN INCOME OF \$3,000 A YEAR

Part I.

IT would be superfluous to say that Paris is a city of pomp and ostentation, where people who have the means and the inclination can easily live in grand style. But, after all, Paris is not unique in this respect, for both in the old and the new world there are a number of cities in which a millionaire finds every facility for living luxuriously. "Give me a hundred million francs," said the Prince de Sagan one day, "and I will undertake to live right royally at the summit of the Himalayas." The hundred million francs not being forthcoming, the Prince remained at Paris. He did well, for I believe that for a given price, there is more comfort and more luxury to be had in Paris than anywhere else. Moreover, in Paris a man can move in the highest and wealthiest society provided he has enough money to pay for his lodging, his board and a decent coat. I will demonstrate that a family with a moderate income can, in Paris, not only surround themselves with every comfort, but even have an aristocratic appearance.

For the purpose of giving this little study a more direct interest, allow me to suppose that I am an American settling down in Paris



GENERAL VIEW OF AVENUE HENRI MARTIN.
Secured by Special Permission of City Authorities by the Representative of the Architectural Record

with my wife; that my yearly income only amounts to three thousand dollars; that I am economical and orderly, but possess, together with my wife, refined tastes, and that my aim is to lead, on my said income, a pleasant and genteel existence.

The first thing that concerns me is to select a flat. This is a point of capital importance. The beauty of a picture depends largely upon its frame, and we—my wife and I—desire to be well framed. This being so, we would not be satisfied to dwell in a flat situated in a common district: in the first place, because the flats in such a quarter are lacking in charm; and, secondly, because it would annoy us to have workpeople and small shopkeepers as neighbors; for, while being, no doubt, very respectable, they have not received



STATION OF BELT RAILROAD,
At the End of the Avenue Henri Martin.

the same education as we, and their habits are different from ours. I am bent upon living in a luxurious district, and yet I don't wish to pay a rent exceeding one-sixth of my income—that is to say, four hundred dollars. In New York, and also in London, the problem would be insoluble. In Paris I shall have solved it in a very short time. For four hundred dollars it is possible to find, in the finest districts, flats which suit a family admirably. I have looked at one which meets these conditions and which is located within sixty yards of the Avenue des Champs Elysées. If I have not hired it, it is because the street on which it is situated is always crowded with carriages, and whilst I am fond of luxury, I do not like noisy luxury. Besides, this street is not lined with trees, whereas I want

to see beautiful trees in front of the house in which I am going to dwell. After searching for two or three days I decide to live on the Avenue Henri Martin, and at No. 29 on this avenue I find the sort of flat I require. Let us see whether I have made a wise choice.

The Avenue Henri Martin is located in a new district, one which, until a few years ago, was covered with hovels inhabited by gardeners. Yet its position, on the high ground near the Bois de Boulogne, is a splendid one, so much so that the first Napoleon was attracted by it. When he had reached the zenith of his glory he decided to construct on that spot, for himself, his family, his court and his ministers, a magnificent palace, which should eclipse everything that had been done before him. "I mean to erect," said he to



BEGINNING OF THE AVENUE HENRI MARTIN.

his two architects, Perier and Fontaine, "a Kremlin one hundred times finer than that of Moscow; it shall be my imperial city, *la cité napoléonnie*." Perier and Fontaine set to work. The plans were made and building operations begun. Just at that time Napoleon started on his expedition to Russia, and this splendid palace, like many other imperial dreams, vanished in the snows of that country. Upon what strange things do events depend! Had it not been for those famous snows I would not have been able to live at No. 29 Avenue Henri Martin, for it was on that very spot that the private apartments of the empress were to have been located. Although my wife does not aspire to play the part of empress, this

souvenir will, I am sure, cause her to find her flat more pleasant than she would otherwise.

But let us not speak of what might have been; let us deal with realities. The Avenue Henri Martin runs from the Place du Trocadéro to the Bois de Boulogne. The proximity of the Bois will be advantageous in two respects: it will enable me to breathe fresh, wholesome air, and it will also enable me to take some delightful walks. Of course my wife and I will go to the Bois on foot, as it will only take us six minutes to get there; but whenever we are disinclined to walk to it we can avail ourselves of the cars, which pass our door and run right to its very gate. At other times these



GARDEN.

In Front of House at No. 29 Avenue Henri Martin.

same cars will carry us to the center of Paris—to the Opera House and the Boulevard des Italiens. Furthermore, this is not the sole means of transport at our command. At the end of the Avenue, near the wood, there is a station of the Girdle Railroad, which encircles the city, whilst at the other end—that is to say, on the Place du Trocadéro—there is a station of the underground electric railroad. And this is not all. If we desire to go up the Seine, say to Charenton, or down it to Sèvres or Saint-Cloud, it will not be difficult to do so, for, as you will presently see, the river is not far away. Observe also that within a few steps of our door there is a cab-stand, which will be found convenient when one is in a hurry.

Let us suppose that to-day I return home by the electric railroad (Le Métropolitain). I get off the train at the station on the Place du Trocadéro, and I have barely two hundred yards to go in order to reach my house. Will you walk this short distance with me? You will then be able to judge whether I have chosen a good spot to live in. As I am not pressed for time to-day we can go slowly. Look at this edifice, the Palais du Trocadéro, which is a museum of comparative sculpture. The building is not ungraceful, and if we enter one of its vestibules we shall have a splendid view of the Champ de Mars, from which we are only separated by a beautiful lawn, bordered at the bottom by the Seine. In front, on the oppo-



ROADWAY.

Opposite No. 29 Avenue Henri Martin.

site bank of the river, is the Eiffel Tower, while in the background we see the Cascade (Château d'Eau). The big gilded half-sphere on the left is the dome of the Invalides. Now let us turn about and cast a glance at the Place du Trocadéro itself. Although small, it has an excellent appearance with the six avenues which radiate from it, namely: 1, the Rue Franklin, in which the illustrious inventor of the lightning conductor lived; 2, the Avenue du Trocadéro, which leads to the Place de l'Alma and the Cours-la-Reine; 3, the Avenue Kléber, leading to the Arc de Triomphe de l'Etoile; 4, the Avenue Malakoff, which goes to the Avenue de la Grand Armée; 5, the Avenue d'Eylau, and, 6, the Avenue Henri Martin. When I tell



ENTRANCE TO UNDERGROUND RAILROAD.

you that the last-named is the finest of them all, I do not say it because I dwell there, but because it is the fact. Our avenue is 1,400 yards long, and in width it is truly remarkable. It is planted with four lines of chestnut trees. There are two sidewalks, two carriageways, and, in the middle, a broad path for horsemen. All the dwellings which border this avenue have a

pleasant appearance, and the houses are very well kept up. Some of them are private residences, whilst others are apartment houses. All of them are occupied by people of the very best class—members of the Institute, noblemen, generals and so forth. For neighbors I have the Prince de Chimay and the Princesse de Polignac. No factory or store or warehouse mars the sumptuous harmony of our avenue. Yet I can assure you that the district is well supplied with provisions, and my wife and the servant have no trouble in procuring, in the adjacent streets, the articles required for housekeeping. Besides, the



BEGINNING OF AVENUE D'EYLAU.

butcher, the baker, the grocer, etc., call every morning for orders and deliver their goods at the house. We can make sure of not being cheated in the weight by having a pair of scales in the house, or by simply spreading the rumor that we have them. In this respect matters are, on the whole, much the same in Paris as elsewhere.

What is not to be found everywhere, however, is the little promenade which you are taking with me from the Place du Trocadéro to my house. I beg you to look at those fine chestnut trees, which throw such a refreshing shade this hot day. Are they not admir-



EIFFEL TOWER FROM THE TROCADÉRO.

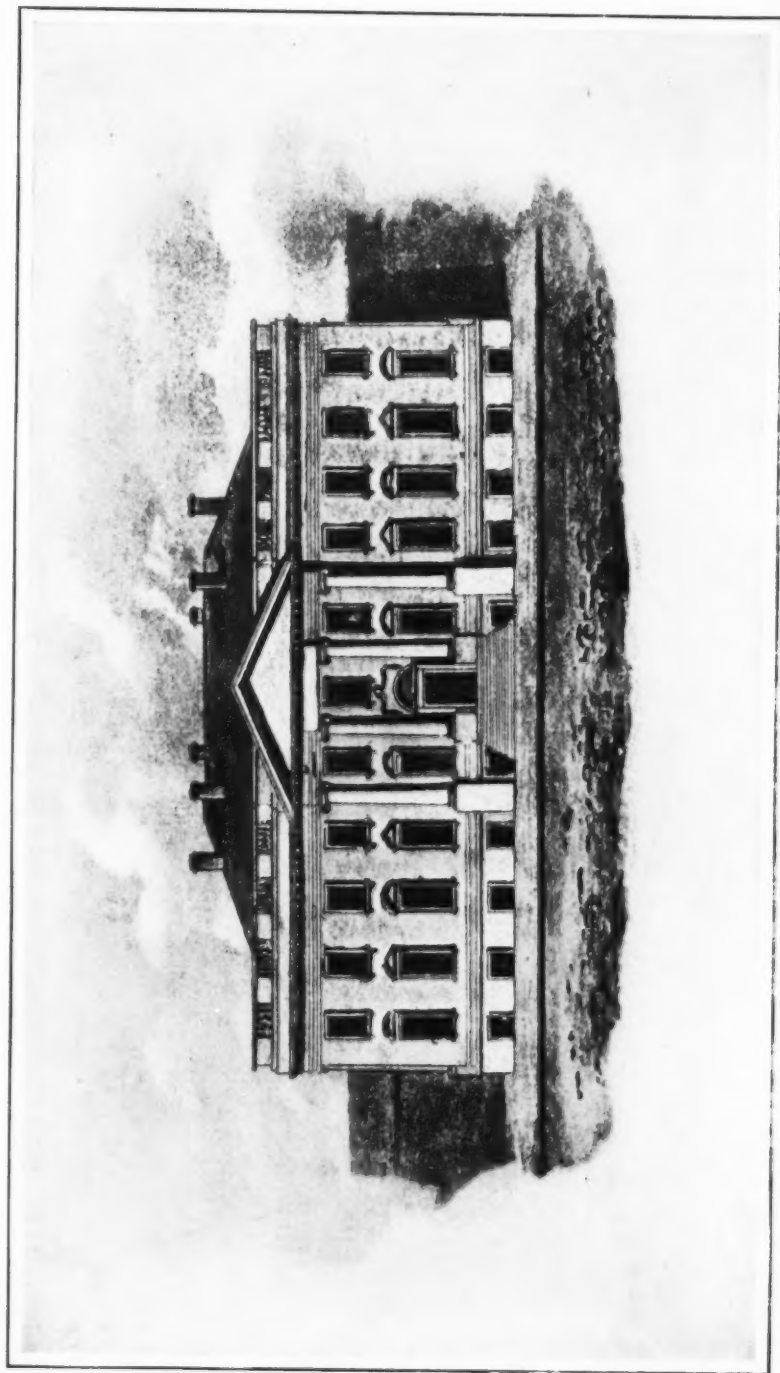
able! In winter they will be leafless and their bare branches will then let pass the precious light. As you see, the sidewalks and roadways are scrupulously clean. There are never any heaps of mud or rubbish lying in our avenue, a thing which, as you know, cannot be said with regard to every street, either in Paris or other cities. The explanation is that Paris is proud of its beautiful avenues and takes care that they are kept in perfect order. On the other hand, practically no carts or wagons pass along our avenue, neither do we meet with troops of noisy workmen, or, worse still, bands of insolent vagabonds. The spot is always quiet—even at those hours when it is traversed by strings of carriages or scores of

horsemen. It is easy to see that all the people we pass are well dressed. Is it not charming to watch that group of little children at play under the trees down there? And those ladies on horse-back going to the Bois, and these officers riding back from there at a gentle trot on their spirited chargers—are they not a pleasant sight? If we were to sit for just a quarter of an hour on one of the benches, we would certainly see several celebrated Parisians go by. Without turning up my nose at the poor quarters, I confess that I vastly prefer to be here than to live in a dirty street where one would be constantly exposed to being jostled by unmannerly boys or drunken laborers.

But while talking we have reached the house in which I live. You observe that, like the neighboring houses, it is separated from the sidewalk by a garden, smaller no doubt than Semiramis' garden, but which nevertheless has a charm of its own. I have witnessed some pretty little scenes in this garden: youngsters galloping on their wooden steeds, while their mother, seated on a rustic chair, works at a piece of embroidery; fine old men reclining on rocking-chairs and smoking a pipe as they bask in the sunshine, etc., etc. Let us get on to the graveled pathway leading to the big front door. And now allow me to take leave of you. In a second article I will conduct you within the house, and we will examine it in detail. In a third and final article I will let you inspect my flat and initiate you into my way of living, showing you how I manage to keep inside my income of 3,000 dollars a year. *Au revoir!*

F. Mazade.





THE PRESIDENT'S HOUSE, WASHINGTON, D. C., IN 1800.— BEFORE THE NORTH PORCH WAS ADDED.
James Hoban, Architect.

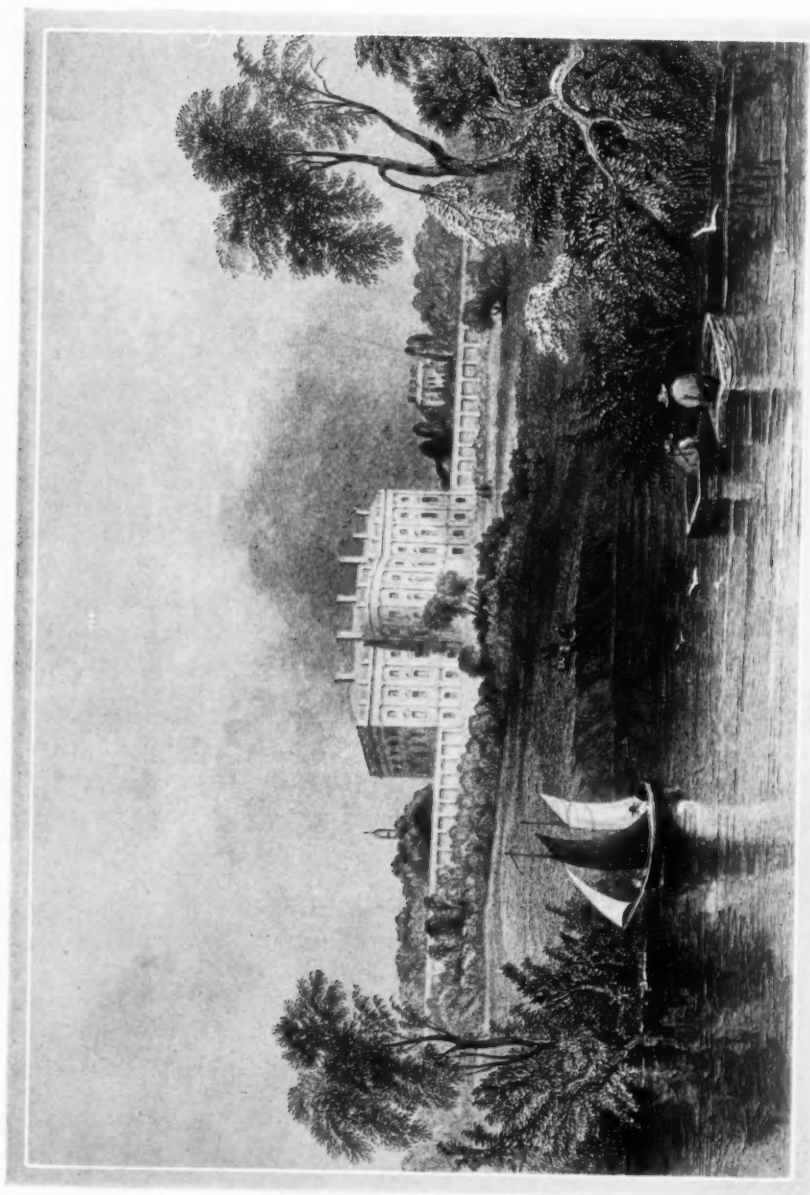
THE NEW WHITE HOUSE.

ADWELLING-HOUSE, which, by the conditions of its erection, is to be inhabited only by leaseholds of four years, with one possible renewal in the case of each lessee, is not a house that one would expect to find very intelligently or affectionately "kept up." Like "Life," according to Omar Khayyam,

'Tis but a tent where takes his one day's rest
A Sultan to the realms of death addressed.
The Sultan rises, and the dark Ferrash
Strikes and prepares it for another guest.

In this case "the dark Ferrash" is the new occupant of the tent or his consort, with such architectural advice as he may choose to invoke, subject to the Chairman of Appropriations in the House, whom he or she has to satisfy of the necessity or desirableness of the proposed outlay. From such conditions you would not expect a continuous tradition, in conformity with which renewals and such changes and modifications as might from time to time be needed should be made. The knowledge and the "taste" of the average mistress of the White House are those of the average American matron, the taste being, naturally, for the fashion of the time, whatever it may be. Hence the periodical clearing sales of such furniture and "objects" as, by the lapse of time, are discovered to have become junk, and the replacement of them by others concerning which that discovery is waiting to be made when the whirligig of time brings in his revenges.

Moreover the White House has been exposed to a peculiar form of envy. Congress has never been given to pampering the President of the day, nor his womankind. The gentlemanlike and rather aristocratic traditions of the early Presidents—for even Jefferson was a Virginian planter, with the social instincts of his class, and with an intelligent interest in architecture, in particular, quite unique among them—had disappeared by the time of Jackson. Jackson himself, according to a tradition that looks trustworthy, was responsible for the greatest mistake that was made in reference to the White House by effacing it from one of the most important points of view. The Capitol and the "President's House" were precisely the "spaces first determined" in L'Enfant's original plan of the Federal City, between which he judged it of the first importance to "preserve reciprocity of sight." The chief arteries of the new city were meant to be the "Grand Avenue" which was to connect the Capitol with the Washington Monument at the foot of the "President's Park" and the Pennsylvania Avenue which was to



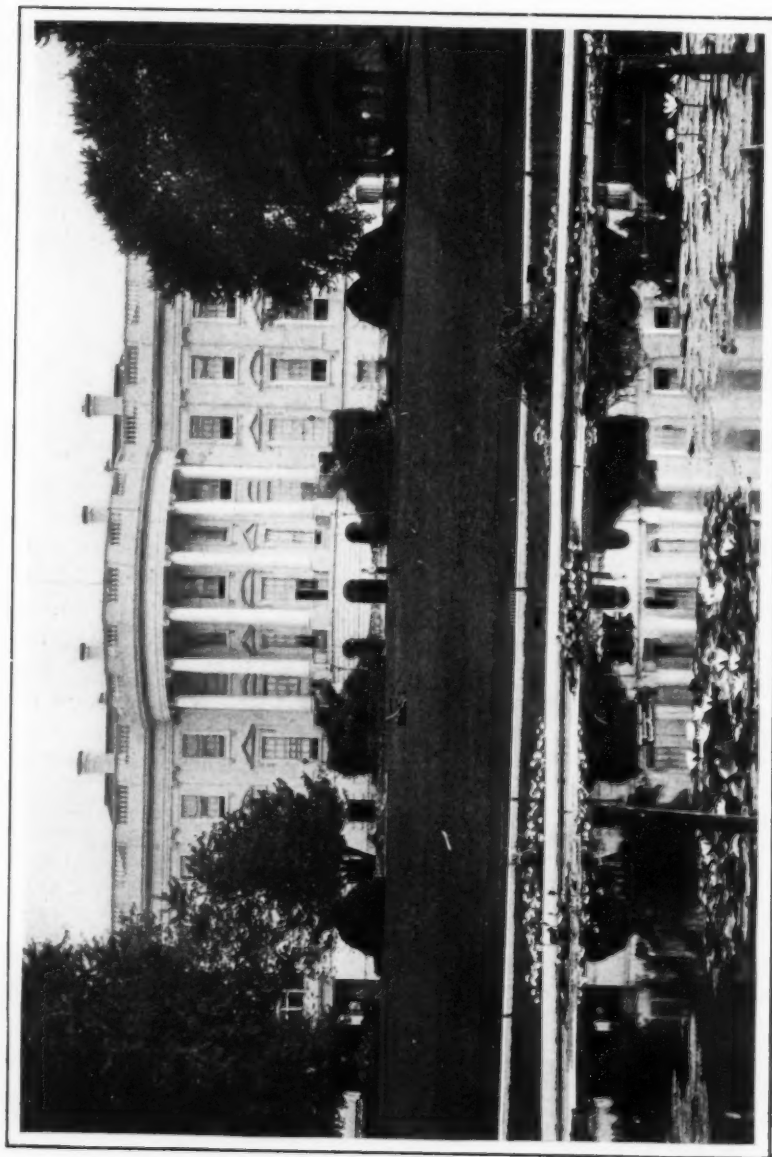
THE PRESIDENT'S HOUSE IN 1840—VIEW FROM THE RIVER.

James Hoban, Architect.

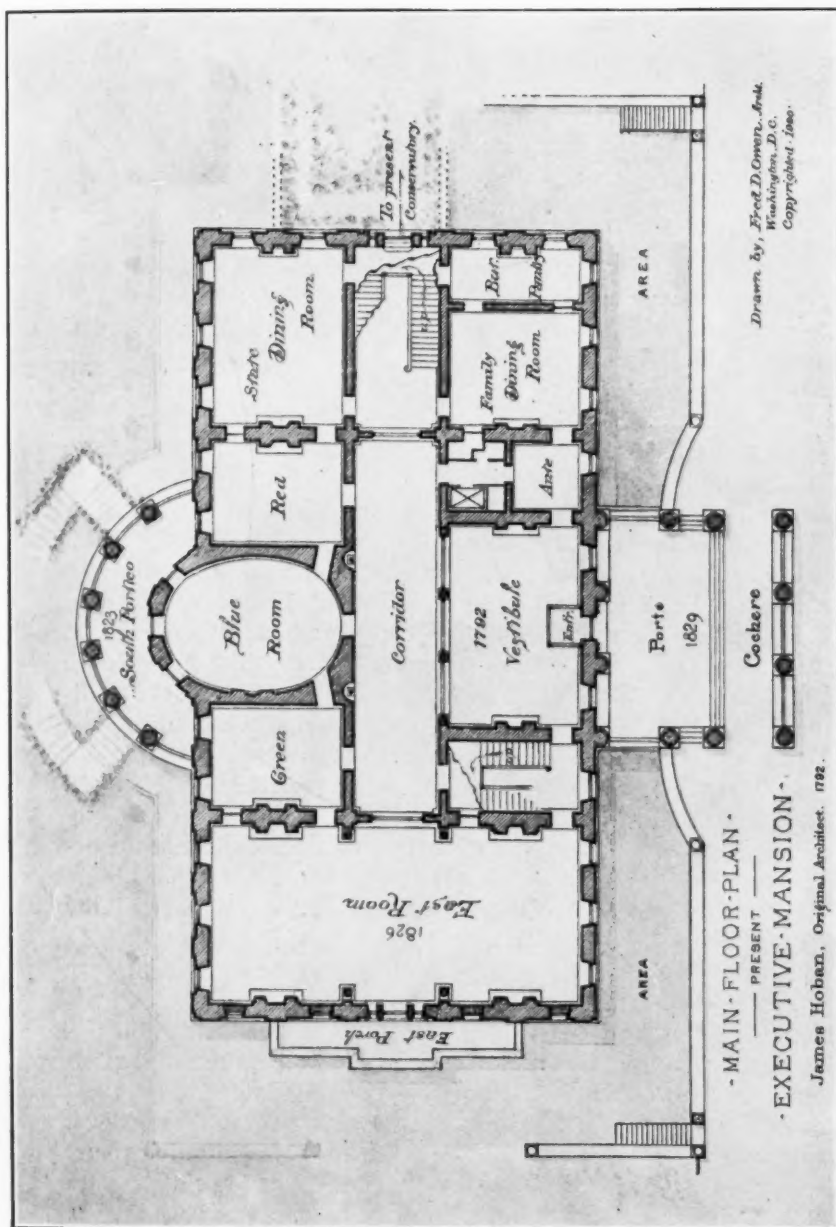
connect the Capitol with the President's House, half a mile to the northward of the monument. The former was never completed, and the purpose of the "reservation" of it had been entirely lost sight of until it was brought into view again by the report and the plans of the Park Commission. The latter was interrupted, the avenue blocked and diverted, and "reciprocity of sight" between the two "spaces first determined" was made impossible when the Treasury building was put in the way, and the placing of it there is attributed to the personal interference of Jackson. But also by Jackson's time the temper and disposition of the people had changed. That "fierce democratic" which the framers of the Constitution so dreaded and deprecated had arrived in spite of them, and was in full possession, and was much opposed to anything like luxury, almost to anything like elegance in the President's House, which should invidiously distinguish it from humbler habitations. Our republic was not like the Roman, which, according to Cicero, "hated private luxury, but favored public magnificence," and it failed to draw the just distinction between the President's House and the house of a private citizen. According to the sprightly Nathaniel Parker Willis, who inhabited Washington during the Jacksonian era, and wrote a description of the White House, not yet so-called, for a London book, "American Scenery," published in 1840, the description written, as the author explains, "during the last month of Jackson's administration," Congress delighted to make the President's House "the scapegoat of all sumptuary and aristocratic sins." Congress would not spend the money to complete Hoban's original design, now at last completed, and was perversely niggardly in the appropriations for furnishing, with results which Willis describes:

"There is an inequality in the furniture of the whole house, owing to the unwilling and piecemeal manner in which Congress votes any moneys for its decoration, which destroys its effect as a comfortable dwelling. The oval rooms are carpeted with Gobelin tapestry, worked with the national emblems, and are altogether in a more consistent style than the other parts of the house. It is to be hoped that Congress will not always consider the furniture of the President's House as the scapegoat of all sumptuary and aristocratic sins, and that we shall soon be able to introduce strangers, not only to a comfortable and well-appointed, but to a properly served and neatly kept President's mansion."

Everybody interested in the matter knows that James Hoban, the architect of the White House, was an Irishman who emigrated to South Carolina and practiced architecture with success in Charleston before he went to the site of the Federal City that was to be in 1792, with letters of recommendation to Washington from Henry Laurens and other Carolinians, being attracted by the archi-



THE WHITE HOUSE BEFORE THE RECENT CHANGES.



THE MAIN FLOOR PLAN OF THE WHITE HOUSE BEFORE THE RECENT CHANGES.

tectural opportunities there opened. He won the competition for the President's House without dispute, while Thornton and Hallet were dividing the honors and rewards for the design of the Capitol. Jefferson's characteristic suggestion that the Capitol should follow some "model of antiquity," while the President's House should be a modern mansion was much more nearly carried out in the latter case than in the former. It is impossible to refer the Capitol to any specific model of antiquity, as the Virginia State House, in which Jefferson had his way, is distinctly referable not only to a Greco-Roman temple, but to the particular Roman temple, the Maison Carrée at Nîmes, barring the change from Corinthian to Ionic, "on account of the expense." But the White House, as it did not begin to be called until the middle of the nineteenth century, was undoubtedly a "modern mansion," as it was projected in 1792. It was a specimen of British Georgian, with some important cis-atlantic modifications, modifications which have been in great part the basis of the present restoration. The vague tradition, which everybody has heard, that Hoban's model was the Duke of Leinster's house in Dublin, survived long and died hard. But it definitely died when somebody became interested enough in the matter to send for photographs of the imputed prototype, when it was seen that the tradition was perfectly unbased. But I am told that there is a very striking resemblance between the White House and the vice-regal lodge in Phoenix Park in Dublin, and the tradition may simply have been misplaced in crossing the Atlantic. Only, if the vice-regal lodge was built for the purpose which its title implies, it can scarcely have served as the model for the White House, since it was under construction at the same time, having necessarily been built after the act of Union, and that act took effect at the beginning of 1801, when the White House was already occupied.

Hoban had charge of the restoration and completion of the White House after the British spoliation in 1814, which was as wanton here as at the Capitol itself, and added the wings which are really the most distinctive features of the design. It appears, from memoranda left by Hoban, that his project included a central building of three stories, as against the existing two, and the superposition over the wings of a full story above ground. It does not appear that he ever made any drawing showing these dispositions, and certainly no further steps were taken towards executing them. But it is remarkable and deplorable that the basement actually built, and which is shown in the print of 1840, up to which Willis wrote his text, should have disappeared by demolition, without any suspicion on the part of anybody concerned that it was, practically and architecturally, one of the most important parts of the design.



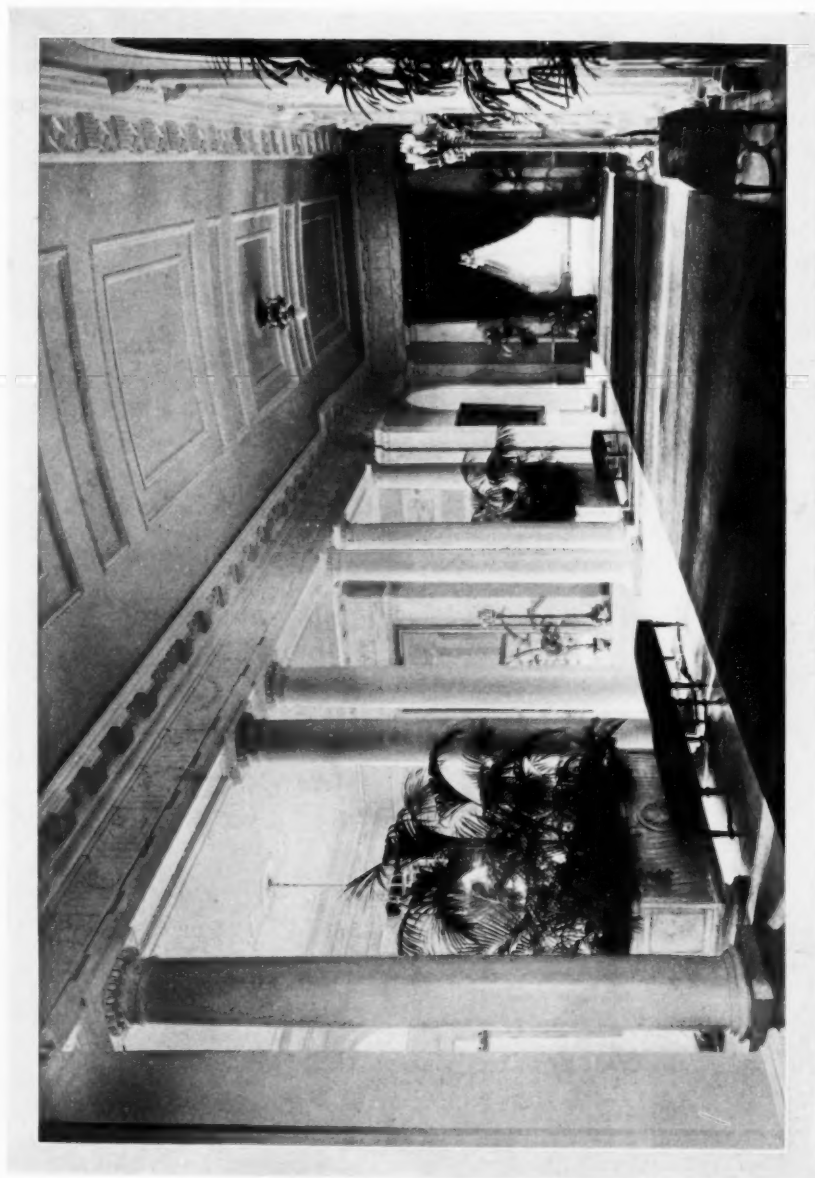
VESTIBULE OF THE NEW WHITE HOUSE.

McKim, Mead & White, Architects.



VESTIBULE OF THE NEW WHITE HOUSE.

McKim, Mead & White, Architects.



CORRIDOR OF THE NEW WHITE HOUSE, LOOKING TOWARD

THE EAST ROOM.

McKim, Mead & White, Architects.

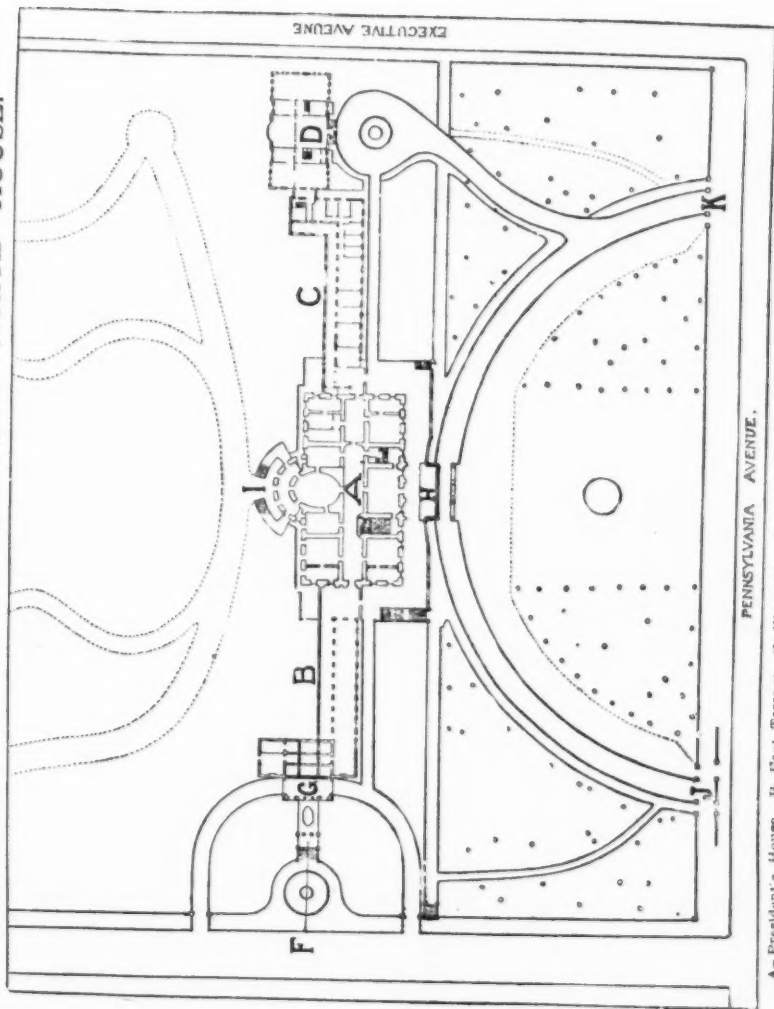


CORRIDOR OF THE NEW WHITE HOUSE, LOOKING TOWARD DINING-ROOM.

McKim, Mead & White, Architects.

As might have been expected from the circumstances under which the house was designed and built, it was the mansion of a planter in tide-water Virginia that furnished the practical basis of the design, and his mode of housekeeping that the designer kept in view. The White House is, indeed, a planter's mansion, though larger and more important than any of its predecessors or contemporaries on the Potomac, the Rappahannock, the York, or the James, even than Westover or Shirley. It contemplated the multitude of house servants that the planter felt obliged to maintain, and provided "quarters" for them under the main roof of the main mansion or in its immediate dependencies. What in England are called the "offices" were accommodated in this basement, including, doubtless, the sleeping places of the servants. But it is also perfectly plain that the basement was not meant to be confined to these humble functions. It was meant also to minister in more conspicuous ways to the uses of the mansion as the seat of a national hospitality. This is manifest from the handsome, even monumental corridor of the central part, under the house proper, which is spacious and dignified in design and very solid in execution with its massive walls and its massive ceiling in groined arches. The colonnade of the wings nearly or quite tripled the length of the house, and added immensely to the exterior impressiveness as, now that it has been restored, it again adds to that impressiveness. It carries out most completely the notion of the planter-builders that the front on the river, and not the front on the highway, was the proper architectural front of the mansion. All the great houses of Virginia fronted the rivers, for every great planter maintained his own wharf and port of entry. "The great commodiousness of navigation and the scarcity of handicraftsmen" were assigned by Burke, and no doubt accurately, as the reason why there were in old Virginia no considerable towns. When the White House was built, it is to be borne in mind, that the Potomac was much nearer to it than now, and the river view proportionately more important. And the lay of the land, which slopes gently but decidedly towards the river, facilitated the endeavor of the architect to make his river front the "architecturesque" front. For, as we see, now that the colonnade wings of the basement have been restored or exhibited, while from the north, from Pennsylvania Avenue, they constitute a terrace just visible for most of its length, on the lower southern front the slope of the ground raises them to a complete story that forms an emphatic and effective stylobate for the superstructure. This was so exclusively "the" front, in the mind of the original designer, that the single feature the street front shows, the central portico, is not Hoban's work, but was added by other hands. As we see, even so late as 1840, there could be no doubt in the mind of a judi-

GROUND PLAN OF THE NEW WHITE HOUSE.



PENNSYLVANIA AVENUE.

A—President's House. B—East Terrace. C—West Terrace. D—Executive Office. F—Public Entrance. G—Porte Cochere.
H—North Portico. I—South Portico. J and K—Entrances.



ENTRANCE TO THE STAIRWAY OF THE NEW WHITE HOUSE
FROM THE MAIN FLOOR.

McKim, Mead & White, Architects.

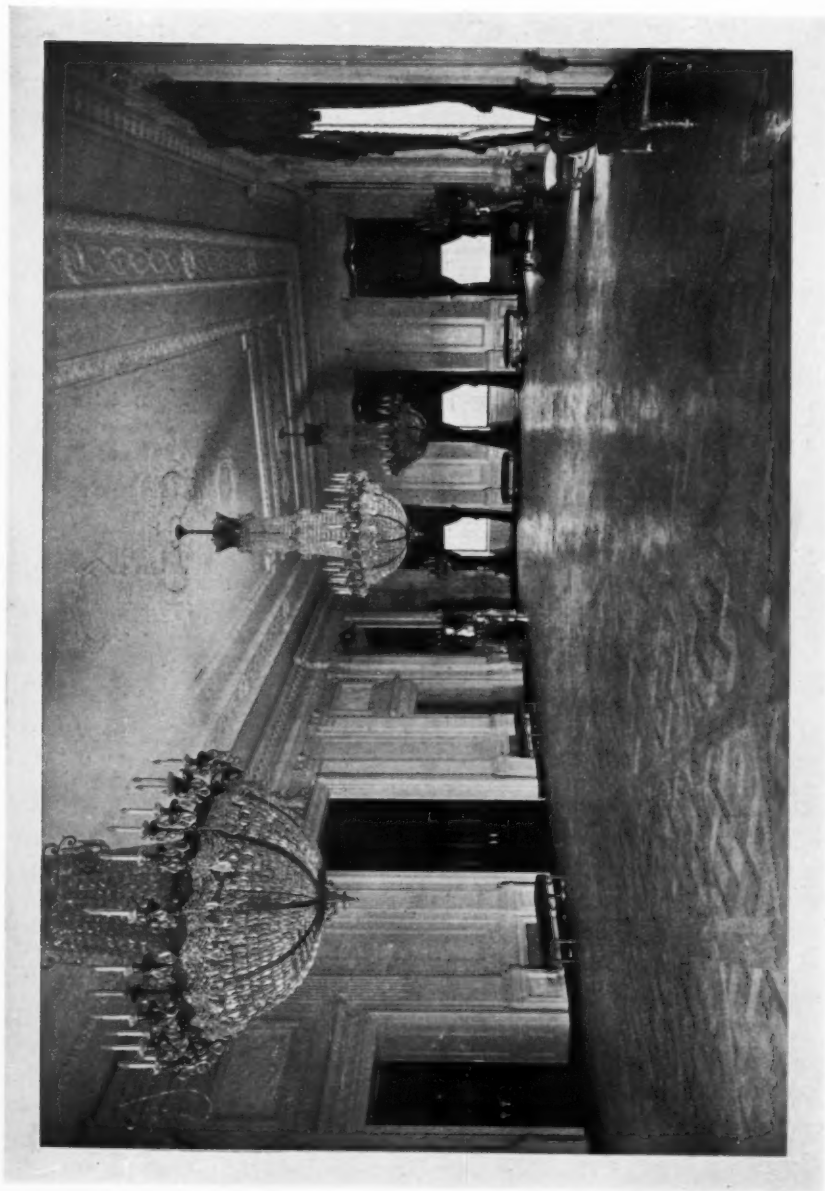


TURN OF THE STAIRWAY IN THE NEW WHITE HOUSE, ASCENDING TO
THE SECOND FLOOR.

McKim, Mead & White, Architects.

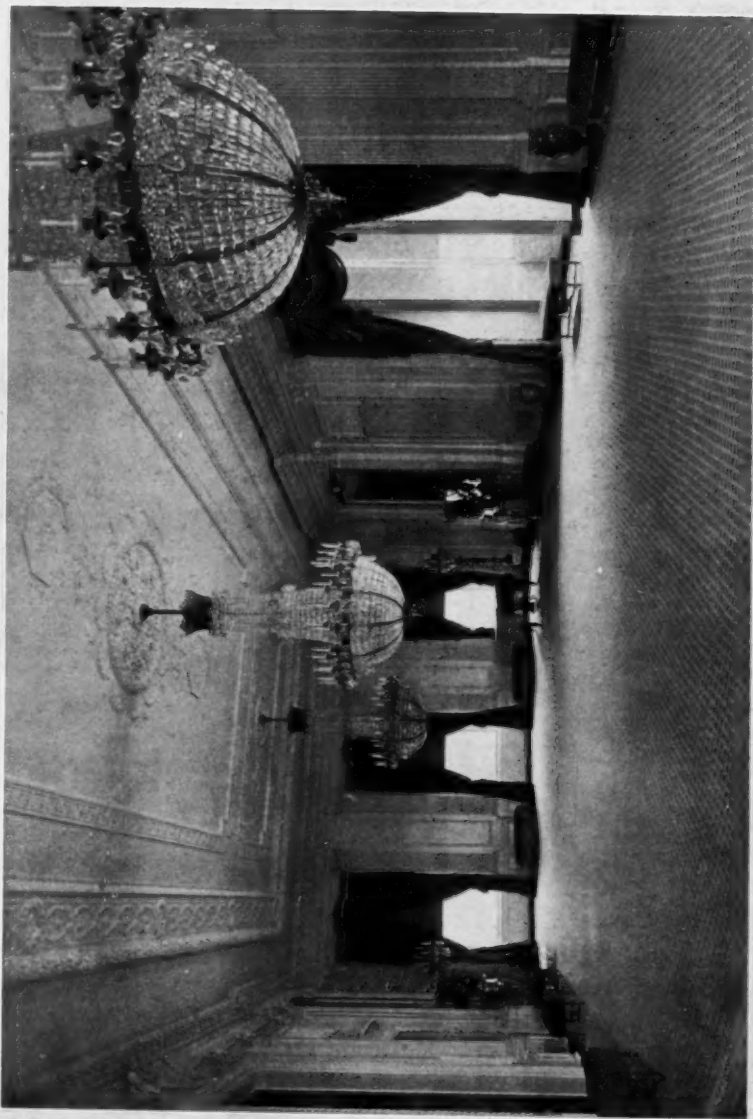
cious illustrator, bent upon presenting the building to the utmost advantage, that the garden front and not the street front, was the front to "take." Whereas, to the present generation, and since and even before the civil war, the mental image called up by the mention of the White House has been the vision of the subordinate front, the real "rear elevation" on Pennsylvania Avenue. This is a strange change in the public point of view, but it is easily explained. Successive occupants of the White House and their architectural advisers quite failed to appreciate either the uses or the beauties of the stretching wings of the basement and their fronting colonnades, on the true front, of hewn stone. The east wing towards the Treasury was demolished outright, it is said by the advice of Mr. Mullett, and for no apparent purpose beyond a conviction that its room was better than its company, and that to remove it was to effect a good riddance of bad rubbish. In that case it is not the lightest of the architectural offences that load his professional memory. On the other side, the west side, the colonnade was not destroyed, only so obscured and effaced that none of the recent occupants of the White House has even known of its existence. This effacement was due to the desire of successive ladies of the White House for conservatories and more conservatories, adjoining the main building and one another. Moreover the gardening has been such as to add to the impression that the front which was the principal in the designer's mind was not only subordinate but negligible. The planting has been so done that to-day there is not a good view of the garden front to be had from any point. It is a corollary of the architectural restoration of the White House that its immediate frame and setting shall be a garden of the "formal" or "Italian" type, conforming to and proceeding from its own architectural indications, which shall mediate between it and the English or informal garden beyond. And through this outer landscape it will clearly become desirable to open vistas, by which "reciprocity of sight" may be preserved between the most interesting views of and from the White House on its river front.

It proceeds from the things we have been explaining that when Mr. McKim was chosen, with the unanimous assent of his profession, to take charge of the alterations that had clearly become necessary in the President's House, he found, very likely to his own surprise, that his work here, as in the replanning of Washington, was a work not of innovation, but of restoration, and that the practical and the artistic requirements admirably and remarkably concurred. Hoban's design doubtless exceeded the social requirements of the Washington of his time, and some of the things in his scheme that showed most providence had in the interval been ruthlessly lopped off as excrescences, which we now see that they were

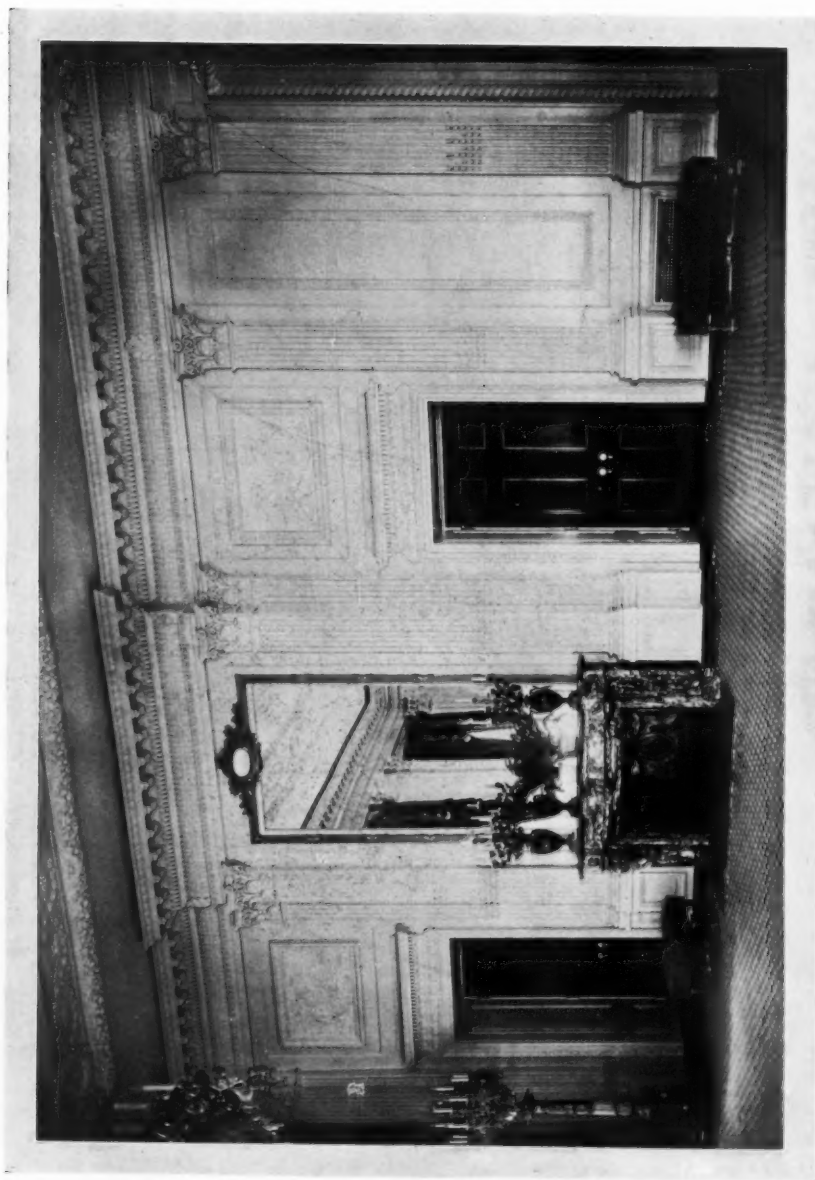


THE EAST ROOM OF THE NEW WHITE HOUSE, LOOKING NORTH.

McKim, Mead & White, Architects.



EAST ROOM OF THE NEW WHITE HOUSE, LOOKING NORTH.
McKim, Mead & White, Architects.



DETAIL OF THE EAST ROOM IN THE NEW WHITE HOUSE.

McKim, Mead & White, Architects.

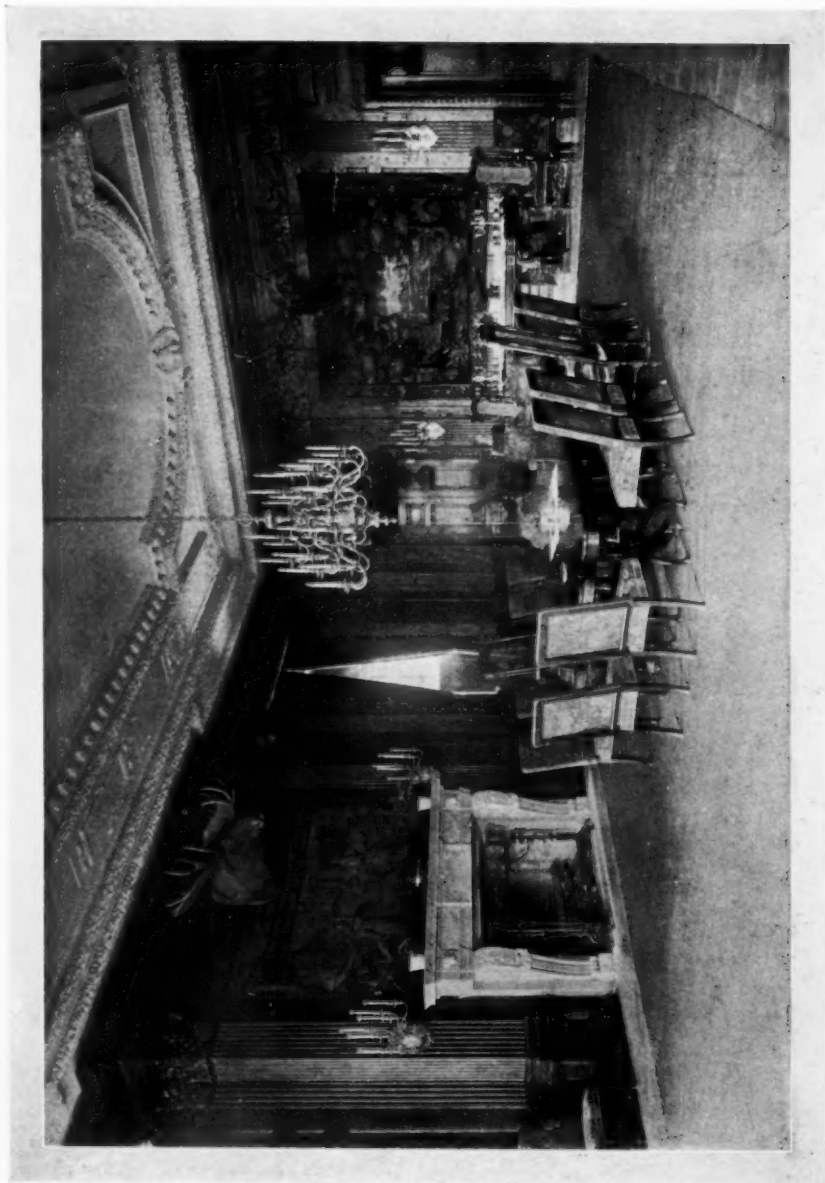
not but integral and necessary provision for the needs of the capitol that was to be. The capitol has for a century been growing up to his design, and the need of more room has become imperative. The strictly presidential business had come to an importance that made it impossible to be decently transacted in the President's House, and the social pressure upon the mansion had equally outgrown its capacities. A presidential reception had come to be a crush, highly inconvenient and undignified to the verge of indecency—beyond the verge, for in the President's House a lack of dignity is a lack of decency. The presidential business is now banished to an office at the eastern end of the "White Lot," one-story brick building of studied unpretentiousness, advertising, as it were, its provisional and temporary character, and attaining the only architectural success possible to it in its inconspicuousness and inoffensiveness. The completion of the building that is to contain the permanent presidential office may now be awaited with much more patience than was possible before. And the new office is accessible from the White House under shelter of the colonnade.

The enlargement of the social facilities of the mansion was of an even more urgent necessity than the banishment from it of the presidential business. The condition was quite intolerable, but for two generations nobody has apparently thought of relieving it by inquiring what the intention had been of the original architect. The basement had been treated like a subterranean garret, or devoted to the systems of communication and service of the house. When these had been buried or banished, the possibilities of the basement for the relief of the intolerable conditions became manifest. The coat rooms and dressing rooms had to be taken out of the already too circumscribed space of the main floor. The eastern wing of the basement, the eastern terrace, could be made really to "accommodate" them all. The north doorway under the portico is now reserved for the use of the presidential family. The guests at the receptions, under the new arrangement, arrive at and descend at the east end of the grounds, on Madison Place, opposite the Treasury, and the whole extent of this eastern wing is at their service for the disposition of their wraps. With proper attendance, it is hard to imagine any throng at a reception that cannot be taken care of without confusion. From this wing the guests make their way through the spacious arched corridor and up an easy stone staircase, arriving on the main floor suitably appressed and ready to be presented. This is the accommodation for the general mass of visitors, for "the line." For the special guests, the guests "behind the line," the entrance to the grounds is at the southwest corner, and they descend at the central oval room under the "Blue Room" and corresponding to it, an apartment, as is now

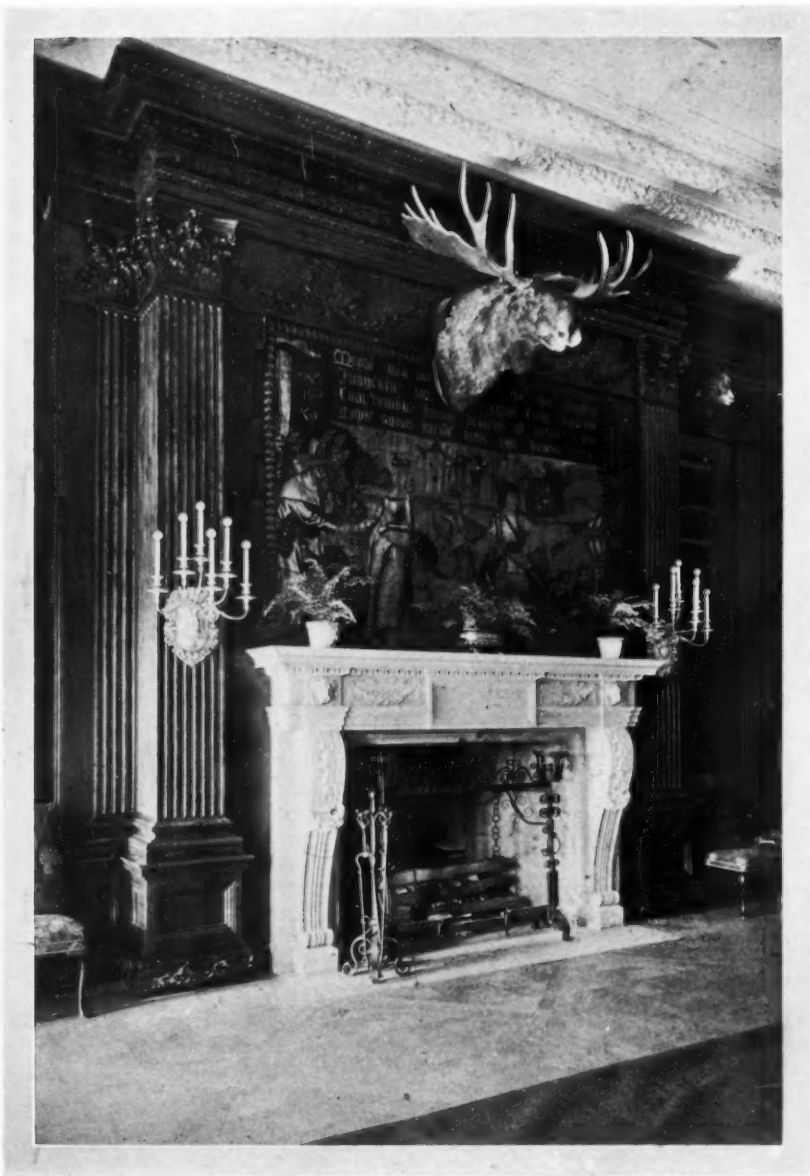


THE RED ROOM OF THE NEW WHITE HOUSE.

McKim, Mead & White, Architects.



THE STATE DINING-ROOM OF THE NEW WHITE HOUSE.
McKim, Mead & White, Architects.



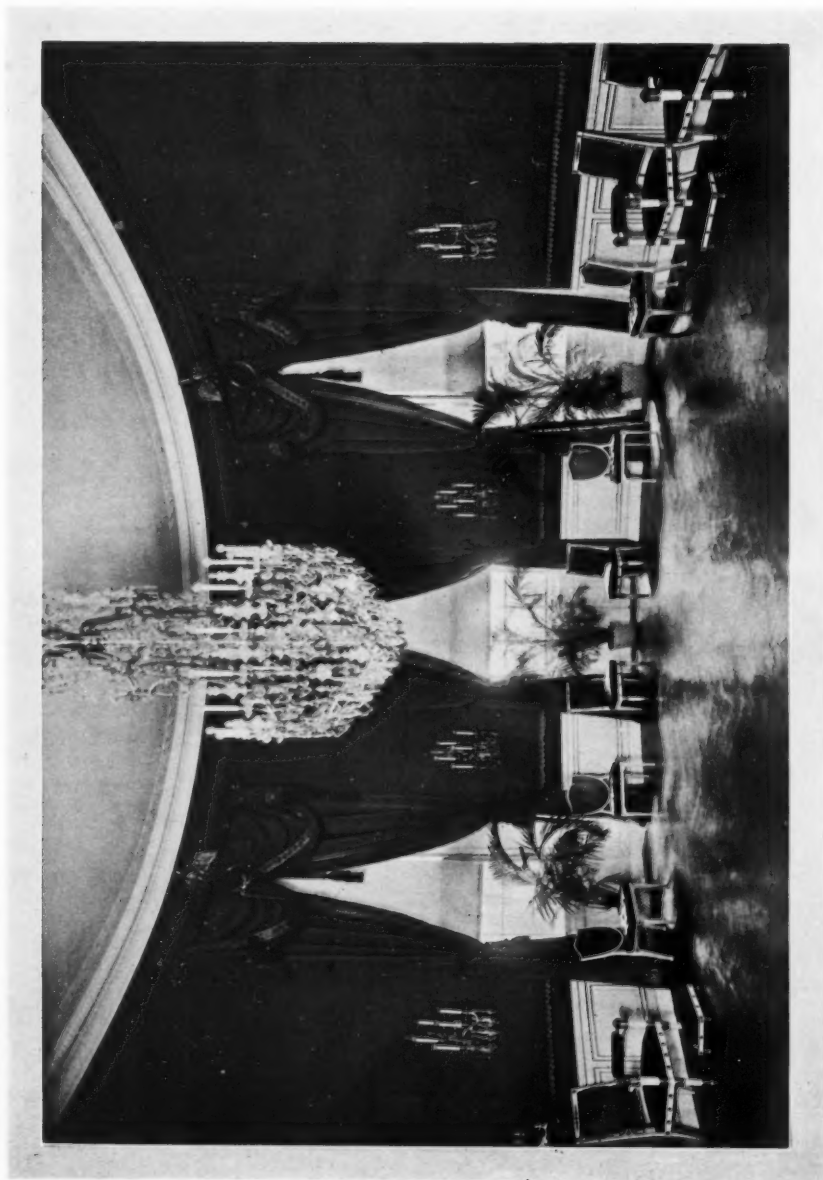
THE MANTELPIECE IN THE STATE DINING-ROOM OF THE
NEW WHITE HOUSE.

McKim, Mead & White, Architects.

seen, highly suitable to the purpose and very much too good for the purposes from which it has been reclaimed. From this waiting room the special guests mount by a separate staircase.

"Circulation" is thus abundantly provided, and the habitual attendants of receptions at the White House express great relief from the old and burdensome conditions, as well they may. Doubtless, the President's House is now the best arranged and equipped mansion in the United States for the promiscuous hospitality, the dispensation of which is so largely the purpose of its existence. Upon the main floor, the increase of available space secured by the banishment of the waiting rooms and the dressing rooms to the basement is very noticeable and welcome, adding greatly to the convenience and even more to the dignity of a public reception at the White House. The glass screen which was put in in President Arthur's time, which was supposedly so "artistic" and manifestly so incongruous, has very rightly been removed, and its place is occupied only by a row of coupled columns. The gain from the removal of the incongruity, though great, is less than the gain in the sense of spaciousness and liberality resulting from the enlargement of what was for such a house a contracted lobby into an ample and virtually an undivided hall, of which the forecourt is occupied, on the occasion of public reception, by the band. But the gains effected by these arrangements are by no means the only such gains in space resulting from the restoration of the basement wings, which extend the total frontage of the mansion to very nearly five hundred feet from something like a third of that extent. For the upper flat ceiling of the wings becomes the floors of wide terraces, on each side of the main floor and continuous with it. There are many nights in the Washington season when these terraces are available for promenade, and by the aid of marquees, they may be made even more largely available.

All this work is, in spirit, and as nearly as possible in letter, a restoration, a return to the original scheme of the White House. It is at least what the original architect might be supposed to have done, if he had had modern means to work with, and the modern purposes of the house to fulfill. There is, indeed, no evidence that Hoban foresaw the pressure that has come and in his basement and his wings meant to provide for it. He was building "offices" or "quarters" for a great house, a Virginia planter's mansion "to the n plus oneth," and was principally allured, we may assume, by the architectural grandiosity which he foresaw would ensue to the garden front, the river front, from the basement which he projected as a stylobate of five hundred feet in extent. It is the modern restorer who is entitled to the credit of perceiving that the execution of the original dispositions could be made to serve the new purposes



THE BLUE ROOM IN THE NEW WHITE HOUSE. McKim, Mead & White, Architects.

and relieve the increased urgency of pressure and to do this with liberality and dignity as well as with convenience. This lucky discovery reconciles all the claims, historical, architectural, and practical, which threatened to conflict, and the conflict of which has prevented an earlier enlargement of the outgrown old house. It was really a stroke of genius. In applying it, Mr. McKim has been fortunate in securing the services as Superintendent of Mr. Glenn Brown, who has not only made a very careful study of Southern Colonial in general, but who, I suppose, knows more about the public architecture of Washington in particular than anybody else whosoever.

In the redecoration and refurnishing of the interior, the "sweeping and garnishing," it is plain that what our old friend Nathaniel Parker calls "equality and consistency" have been kept in view, and also the fact that the White House is a Colonial mansion. Not that there is any meticulous precision of colonialism. Rather the contrary. It is an intelligent as well as a sensitive and respectful restoration. But it is none the less a restoration. The Colonial note is struck at once, when one enters the spacious hall of which the spaciousness has been regained by the removal of the intruded glass screen, and notes the simple Colonial detail of the walls, emphasized by the Colonial white and yellow, and the row of simple coupled columns that alone divides the outer from the inner hall. The traditional names of the apartments are still respected. The oval of the central swell of the garden front is still the Blue Room, though hung now in blue silk, and having its upholstery contrasted with gilt eagles, the Green Room still the green room, though now in Genoese velvet. Of the terminal apartments, the largest and most famous, the East Room is done in white with an elaboration of plasterwork at once profuse and delicate, while the State dining-room is richly panelled in oak, and decorated with trophies of the chase.

It was not to be expected that everybody should be pleased, and some there naturally are who are, so to say, committed against being pleased. It is commonly worth hearing what the "devil's advocate" has to say for himself when the question is of appraising a new work which aspires to public appreciation. In this case he takes his stand mainly upon the literal accuracy of the restorations, which he denies. According to him, Hoban has been flouted in that his row of single columns, which retakes the place of the extruded screen of stained glass, has been supplanted by a row of coupled columns, and in that an actual original partition wall has been torn down to enable the enlargement of the State dining-room. These criticisms do not seem very serious. We need not hold to the plenary inspiration of the original architect in order to pay re-



THE BLUE ROOM IN THE NEW WHITE HOUSE.

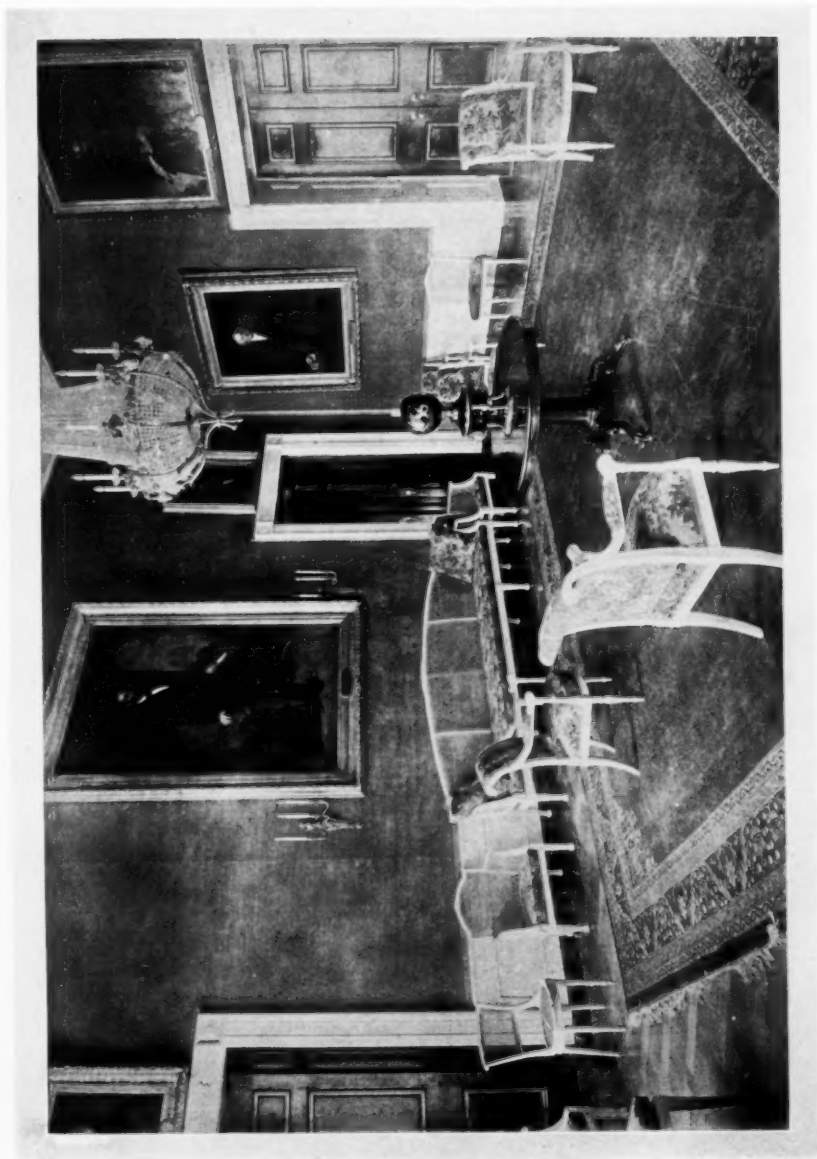
McKim, Mead & White, Architects.

spect to him and to his work, and the doubling of his single columns does not pour contempt upon him. As to the ruthlessness of pulling down a wall, the wall was doubtless a piece of building history, but it was in no sense an object of architecture, being introduced for a convenience of subdivision, and removable, one would say, as soon as a more urgent consideration of convenience arose. This it clearly in this case did. The State dining-room was too small for its uses, the latest occasion of the demonstration of its inadequacy being when the Rochambeau dinner of a hundred covers had to be given in the East Room, and it is not questioned that the mode chosen was the most feasible mode of enlargement. It would have been absurd to obstruct a needful change by keeping standing a useless partition as a monument to Hoban, when you have only to "circumspice" to see his monument. When the advocatus diaboli points out to you, however, that the "Style Empire" in the Blue Room is an anachronism in an American Colonial mansion which antedates the French Empire and its style, he is on firmer ground, at least from the point of view of "restoration." And so he may be when he maintains the incongruity in a Colonial mansion, of a "speise-saal" in a "jagdschloss" as he designates the oaken banquet hall with its tapestries and its hunting trophies. But neither architect nor spectator is bound to confine himself exclusively to that point of view. And, with all possible respect to our revered progenitors, one has to admit that Colonial architecture does not contain the elements for the complete decoration and furnishing of a great house. A White House all carried out in strict Colonial would be but a monotonous and insipid mansion. The real question seems rather to be whether, in introducing a wider variety than his selected or imposed style provides, the modern architect has done so at the expense of "equality" and "consistency." That is an artistic and not an archæological question, and it does not seem to me that Mr. McKim has any reason to apprehend the application of it to his work. Certainly, it will not be disputed that the total impression of the house is now, almost for the first time in its history of a century, a single and clear and not a confused and miscellaneous impression. The note that is struck at the entrance undergoes modulations, but does not encounter discords. Neither will it be disputed that the detail has almost everywhere been most carefully and skilfully adjusted to the general design, and this includes the furnishing as well as the strictly architectural development, or rather as a part of that development. The prevailing expression is of that simplicity and modest understatement that make the charm of Colonial work. There is even in the handsome and adequate carrying out of the architectural idea, an express renunciation of gorgeousness, of pretension, of "palatial magnificence." A partial



THE GREEN ROOM OF THE NEW WHITE HOUSE.

McKim, Mead & White, Architects.



THE GREEN ROOM OF THE NEW WHITE HOUSE.
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exception to this remark may be, perhaps, noted in the East Room, where, in the heavy mantels of dark polished marbles, the sumptuousness of the material seems to be rather unduly insisted on, to the detriment of the light and delicate detail of which the decoration elsewhere consists. It is the only exception I have noted to the rule of simplicity, and the attention it attracts in itself attests how uniformly the rule has been observed. But most of such opposition as the new work has encountered is also a tribute to the strictness with which the rule has been applied and denotes an unregenerate hankering, on the part of the opponents, for the fleshspots of "palatial magnificence." "What," they say, in effect, "all that money spent and nothing to show for it," meaning no Mexican onyx or malachite, no inlays or incrustations, no scagliola, no barbaric pearl and gold in general. Meanwhile, the taste for palatial magnificence is being nourished in the Capitol by some decoration, representing, in paint, that Statuary Hall is lined with polished granite regardless of expense. There is nothing austere about this decoration, and the statesmen who resent the absence of fleshspots in the White House presumably think Uncle Sam is getting the worth of his money in these shams at the Capitol. There is no self-restraint upon the part of the decorator there, but manifest reason why restraint should be imposed upon him from without. And it is seriously disquieting to learn that upon the author of these exuberances, who is not even an architect by profession, it is seriously proposed to confer the designing of a new Congressional office building, and the power of awarding the design of the new municipal buildings of the district. But the White House, at least, is secure. We may be fairly sure that the original architect, could he revisit the scene of his labors, would be as delighted as surprised to see what has come of the development of his ideas, on the lines of the indications furnished by himself. The President's house is at last, as it ought to be, the dwelling in the United States best adapted to dispense, with convenience and with dignity, the national hospitality.

Montgomery Schuyler.

OVER THE DRAUGHTING BOARD.

Opinions Official and Unofficial.

In the "Field of Art" of a recent number of "Scribner's Magazine" Mr. Henry Rutgers Marshall enters into a discussion of the proper relation between the universities and the practical teaching

The Universities and the Fine Arts.

of sculpture and painting, and reaches a very different conclusion from that which Mr. Russell Sturgis defended in his pamphlet of last summer. Mr. Marshall, that is, does not agree with Mr. Sturgis that the work of a department of fine art in a university should be limited to the "history, theory and critical examinations of ancient and modern works of art," and of the schools in which they are divided; he believes that the universities can also profitably establish technical schools of painting and sculpture. "Toward the fuller development," he says, "of university teaching in æsthetics in the direction suggested we are obviously tending. That it must surely unfold in time in complete form seems inevitable, for the simple reason that the final goal of all pedagogical systems, beyond which there is no further step, appears in the establishment of schools of practice, and without such schools of practice, no pedagogical system can be held to have reached its legitimate and complete development."

We dissent entirely from this conclusion—except in one respect. It may well be that the study of the history, theory and science of æsthetics will have its natural culmination in a certain amount of actual practice in one or more of the fine arts; but if so, it will not be because the historical and theoretical foundations of painting and sculpture need to be studied in order to equip a man for the practice of those arts, but because without some small practice in the arts, no one but a very exceptional man can make his study of art history and theory luminous and real. A man of letters may, of course, possess an imagination so sympathetic that he can reach a sufficient appreciation of the arts without any technical training, but as a matter of educational discipline it remains generally true that no teaching of æsthetics can be held to have attained its full development without the mental, manual and sensuous training which comes from at least attempting something of the work of a "real artist."

Mr. Marshall's paper reads as if it were written without any reference to Mr. Sturgis' pamphlet. It really turns upon a total different series of considerations. "University education," said

Mr. Sturgis, "has to do with thoughts that can be taught in words and all that is expressible in the language of words. A manual art has nothing to do with thoughts that are expressible in words; by it thoughts are expressible wholly otherwise." Mr. Marshall ignores this distinction; he urges that "there is no deep-seated difference between genius as manifested in the artist and in those who express themselves in non-artistic fields," and that it is an error to suppose "that the study of pure theory, the investigation of law, and the formulation of principles tend to crush out genius." But surely such considerations are beside the mark. A man may believe most cordially that there is no deep-seated differences among men of really constructive imagination, no matter whether they are philosophers, naturalists, poets or painters, and that there is no such incompatibility as is frequently supposed between critical and creative work; yet at the same time he may dissent entirely from the conclusion that the technical instruction of painters and sculpture should be obtained at university schools. The question is not one of the relation between intellectual and imaginative processes or of the good or evil influence of culture on genius; it is simply one of the ways to give painters, sculptors and for that matter architects, too, the kind of training that will best equip them for their work. The advocate of university instruction for painters and sculptors must show, not simply that there is no incompatibility between the imagination and the reason, not merely even that a student cannot become a competent art critic, without some practice in the arts; he must show, also, that in the technical mastery of such special arts as painting and sculpture, the university atmosphere of general ideas, and the university mechanism of books and lectures are as helpful to the artist as they are to the scholar. Mr. Marshall contributes no arguments that bear upon this special point, and Mr. Sturgis' contention that universities should confine themselves to the teaching of thoughts expressible in words remains as valid as ever.

But since Mr. Marshall has in effect raised the whole question as to the relation between the higher education and the practice of such arts as painting and sculpture, it may do no harm to "express in words" what we hope are a few thoughts upon this portentous problem. If the schools of art practice should, as Mr. Marshall so confidently predicts, be added to the complete university, the whole university influence would be used in order to make artists accept the ordinary undergraduate training before entering the art schools—just as Harvard is insisting at the present time that a student obtain a bachelor's degree before entering the law or medical schools. So the question naturally arises whether a young man proposing to be a painter or a sculptor should in any event be

encouraged to spend the time and submit himself to the training which are involved in securing an A. B.

Here again we are inclined to testify in favor of separating the universities from technical training in such arts as sculpture and painting; and this testimony is prompted not by any distrust of university training in itself, but because of a profound conviction of the special character of the discipline demanded by the plastic arts. It will be a good thing for the American people when public opinion insists that young men of sufficient means, who are going into business, law, medicine or any of the branches of engineering should receive, not only the professional knowledge and training which their work requires, but also a sound general education. It is a good thing, in the present state of American culture, that what few poets we have, and a fair proportion of our novelists are college bred, for the sort of insight most required in the better contemporary literature needs both the leaven and the definition of well-informed ideas. It is a bad thing for the American stage that the writing and production of American plays is so largely controlled by people whose training and outlook has been almost exclusively theatrical. Finally, however, it is a good thing for American painters and sculptors that usually they have begun their special work without incurring the preliminary disadvantage of a university education.

For, in the first place, it is very doubtful merely as a matter of practical convenience whether an incipient painter or sculptor can afford to spend such four critical years as those which precede his twenty-first or twenty-second birthday in studies, which are not of immediate assistance to him in his chosen work. The labor of attaining technical mastery of his tools and materials is one that cannot be begun too soon after he has received a respectable rudimentary education; and it is a labor which must be continuously and most zealously pursued. We are aware that the same argument has been used to discourage boys, who are destined for a business career from postponing the beginning of their business training until after their graduation from college, but the two cases are not analogous. Business does not or should not demand the same sacrifices from its followers as art; and the training which a collegiate education gives is both directly and indirectly serviceable in many lines of business. An art, on the other hand, is or should be a jealous master. It does not want a divided allegiance. It exacts of the men who pursue it an altogether peculiar and persistent devotion.

It is this consideration which fetches us to the heart of the matter. A boy of energy, of quick and large achievement, could doubtless spare the time to go to college; but his college work, if he

took it seriously, could only be a distraction. The claims which his calling have upon his time should be paramount. The one thing which a young painter has to do is to learn how to paint, not only because the liveliest enthusiasm and the highest ambition are barren without sufficient technical mastery, but because in devoting himself to painting alone, he habituates himself to seeing and thinking as a painter. That is a task which is difficult enough in itself, but which is rendered much more difficult by the peculiarly bookish character of our contemporary culture. It can be only accomplished except in the case of the extraordinary man, by doing a certain violence, particularly during a man's early and more plastic years, to the ordinary educational methods and ideals. After the habit is once attained of seeing and thinking primarily in visual terms, and after the technical skill necessary to render these visual thoughts in a painter's medium has been fully acquired, a painter is much more at liberty to permit himself other thoughts and interests; but to send him to college first is, in case he does not get interested in his books, merely a waste of time, while in case he does become interested in his books, it threatens to disqualify him for his subsequent work.

There are many people who will believe that this is an extremely narrow view to take of an artist's training and calling—one which, so far as it is adopted, makes for an art, whose interests are chiefly technical, and which is devoid of intellectual aspiration and distinction. Well, we shall not quarrel with these people over the use of the word "narrow." Great achievement in art, philosophy and religion is frequently reached only by the most exclusive preoccupation and the most rigorous discipline; and the men who abandon themselves to such a preoccupation and discipline often seem narrow to the partizans of a liberal extensive eclectic education. The modern cultured man tends to spread himself tolerably thin over a large area of liberal and humane studies, and frequently fails to discern the much greater liberality and momentum which attaches to a passionate and jealous absorption in one chosen calling. He does not understand that the very intensity of these exclusive intellectual pursuits is frequently more edifying both in morals and insight than the most liberal eclectic education. As to the reproach that an exclusive manual and sensuous training for artists encourages mere technical training, it may be said that what is mistaken for "mere technical cleverness" is often simply the proper language of a plastic art—its native and primary terms of expression. The critics to whom this language is unfamiliar, who crave for something more explicit and communicable—and this class includes nearly all men of intelligence and education, whose interest in the fine arts is historic and occasional—are frequently

finding fault with the most hopeful and meritorious characteristic of American painting and sculpture.

Finally, be it added, that indispensable as the universities are within their own special fields, there are other roads to the goal of intellectual eminence and distinction. The universities are invaluable for their services in enlarging the boundaries of knowledge, in disseminating humane ideas, in educating young men for the privileges and duties of citizenship in a democratic state, in training them for professional careers, and in preserving and handing down the priceless intellectual heritage and traditions of a Christian civilization; but the Greeks and others had a way of obtaining insight and assimilating ideas before anything corresponding to a modern university was in existence—the way, that is, of the spoken rather than the written word. We make bold to say that, given a good rudimentary education, any man of active and eager mind, who has acquired the power of intellectual concentration, indispensable to the serious practice of an art—that any such man in the ordinary give-and-take of social life can get hold of all the ideas and culture which his intellectual or artistic salvation demands. Every modern society, besides the carefully organized and elaborated intellectual heritage, which is resident in the universities, has its stock of disinterested enthusiasms, ideals, and points of views which form the conversational currency of serious men and women, and which can be appropriated by anybody who has any intellectual sympathies and imagination. Knowledge and ideas obtained in this way are knowledge and ideas in their liveliest, freshest, and most penetrating form, for they carry with them in a peculiarly piquant way the sweetness or the sting of personal and social impressions; they come to you winged by the enthusiasm or crossed by the doubt or intensified by the opposition of another man; they are really fundamental in the intellectual life of everybody, no matter how much they may be reinforced or attenuated by the more official sources of enlightenment. The power of these informal and casual intellectual influences will depend, of course, upon the faith and interest in ideas taken by a large fraction of the people a man meets; it will depend upon the extent to which the men of action of all kinds have the instinct to crystallize into a definite and disinterested opinion the results of their experience, and upon the sincerity of their wish to impress these opinions on their neighbors; it will depend that is upon the sweep, intensity, coherence and momentum of the ideas that pass current among men of a certain grade of intelligence. It must be admitted that in our American life at the present time the quality of these ideas is not high, and that one is more frequently impressed by the intellectual levity of the men who are really doing serious work, than by the ardor and sincerity of

their convictions; but this does not affect the truth of the statement that the sources of enlightenment hinted at above always remain open to artists, and that the enlightenment they obtain in their ordinary social intercourse is all the enlightenment they need or can profitably purchase.



AUTUMN, BY MLE. DUFAU.



THE MUSIC RACK OF THE NEW WHITE HOUSE PIANO.

TECHNICAL DEPARTMENT.

A BEAUTIFUL GRAND PIANO.

THE Grand Piano lately presented to the United States government for the use of the White House stands in the East Room by the door and harmonizes admirably with its coloring and decorations as must needs be the case, since it was inspired by the same designer who planned the magnificent whole.

It is a concert grand designed by Joseph M. Hunt and Richard H. Hunt, and decorated by Thomas W. Dewing. These gentlemen were asked to make as beautiful a piano as they could, under no restriction other than the judgment of the architects, artists and connoisseurs who formed the committee which accepted the responsibility of the work and whose names appear on ivory tablet within the case. The architects have studied to create an object in harmony with the architecture of the White House. Throwing aside the styles and symbols of European art, they have taken the American eagle as their artistic norm and treated him in such a masterly way that the quiet strength, the dignity and repose, and at the same time the living force of the supports of the case, make them notable works of consummate art.

The work of Mr. Dewing promises to be equally happy. The charm and delicate variety of coloring of his acanthus scroll strike a new note in formal decoration. But we must look to the picture of "the Nine Muses received by America" destined to decorate the inner side of the top for the completion of his artistic plan. This subject, so completely in harmony with Mr. Dewing's genius, will require several months of labor. When it is in position the vermilion ribbon beneath it will find its true place in the color scheme, already so charming—though unfinished. The piano is in gold, the

lid showing a very delicate band of tracery in a paler shade of the same metal. The name of the maker, in the same unobtrusive medium, hardly appears upon the nameboard, a reticence which will be imitated in these pages.



THE NEW PIANO FOR THE EAST ROOM OF THE WHITE HOUSE.